

Cultivating Schools for Rural Development : Labor, Learning, and the Challenge of Food Sovereignty in Tanzania

Kristin D. Phillips & Daniel Roberts

In the global era, is it wise to set, as policy goals, double standards for the rich world and the poor world, when we know that these are not different worlds but in fact the same one?

- Paul Farmer & Nicole
Gastineau (2009, p. 155)

Around the globe, policymakers and international donors have hailed school cultivation - the growing of plants and produce in the context of the school curriculum - as a cutting-edge approach to learning and charged it with confronting a variety of food-related social, political, and economic issues (Desmond, Grieshop, Subramaniam, 2004; FAO, 2004). Yet despite school cultivation's status as a "cutting-edge" pedagogical strategy, school farms and gardens have existed in communities around the world nearly as long as common schools themselves. And despite the seeming international consensus that school cultivation can enhance learning and community development, approaches to school cultivation have diverged immensely across local and national socioeconomic contexts.

In this essay, we contextualize the current international aid vision of school cultivation within the history of one national context—The United

Republic of Tanzania. We ask two questions: (1) what is the historical, social, and policy context for school cultivation initiatives in rural Tanzania? and (2) to what extent do the international policy vision for school cultivation for food security and current school cultivation practices address the key issues contributing to hunger and malnutrition in East Africa?

Specifically, we turn to the long and rich history of school farms in Tanzania to understand how the practice and discourse of school cultivation has been translated, interpreted, and implemented across the vast political and economic transitions that characterize Tanzania's last century. As anthropologist Dorothy Hodgson, has written on the Tanzanian context:

Development practitioners . . . often suffer from . . . 'historical amnesia' Although many planners rely on the past in the form of 'baseline' surveys in order to evaluate the progress of their projects, few consider the actual history of development itself in the places in which they work. Intent on working for change in the future, they ignore the transformations that have occurred in the past, especially in terms of prior development projects. (Hodgson, 2001, p. 11)

To address this tendency toward historical amnesia in development initiatives, we draw on our ongoing interview, archival, and ethnographic research in village sites in three diverse districts in Tanzania—Monduli district, Singida Rural district, and Lindi Rural district—to study school cultivation in Tanzania. We integrate findings from the policy and research literature; archival research conducted by Phillips on food security and educational development at the Tanzanian National Archives (TNA) between 2004 and 2006; and summer follow-up research by Phillips and Roberts in Lindi and Arusha regions in 2010.¹ The argument that emerges from the data collected is that school cultivation curricula should aim at education that does not simply target the knowledge and skill deficit of rural people, but should also address the political, social, and economic orders that construct and produce those deficits in the first place. We embed our analysis within the conceptual framework of “food sovereignty,” a policy framework for rural development that, in addition to promoting technical assistance for food production, incorporates concern for the political and economic relations that govern access to food.

Food Security and Food Sovereignty: Key Conceptual Shifts in Rural Development

Eight hundred and fifty million people in the world currently suffer from hunger and malnutrition; 815 million of them live in economically developing countries. Of these, 76 percent live in rural areas (FAO 2004b).

Hunger and malnutrition are not new items on international development agendas. Since the World Food Conference of 1974, concerns for “food security” have driven national and international agricultural and rural development agendas. Despite this consistency in concern, considerable shifts have occurred in national and international approaches to eradicating hunger and malnutrition. To provide a brief history of development orientations toward hunger, we summarize shifts in the notion of “food security” between 1974 and 1994 and describe the subsequent re-orientation toward a goal of “food sovereignty” by some nongovernmental organizations, civil society organizations, and social movements.

The major change in the history of thinking about food security has been a shift from the global and national level to that of the household and individual. The World Food Conference of 1974 centered on a concern that the world food system could no longer address the needs of the world population. The report from the conference defined food security as the “availability at all times of adequate world supplies of basic food-stuffs . . . to sustain a steady expansion of food consumption . . . and to offset fluctuations in production and prices” (quoted in Maxwell, 1996, p. 156). The conference led to efforts to create national self-sufficiency in food supplies and to create financing for countries to meet unexpected needs to import food (Maxwell, 1996).

It was Amartya Sen’s (1981; 1999) economic theory of entitlements that fundamentally altered the development paradigm for hunger issues (Agriculture and Natural Resources Team, 2004). Through analyzing the Bengali famine of 1943, Sen’s work shows that widespread hunger and famine can exist even in the presence of an adequate national and international food supply. The question, Sen (1981) argues, is one of entitlement—the “relations that govern possession and use” in a given society (p. 155).

Viewed from the entitlement angle, there is nothing extraordinary in the market mechanism taking food away from famine-stricken areas to elsewhere. Market demands are not reflections of biological needs or psychological desires, but choices based on exchange entitlement relations. If one doesn’t have much to exchange, one can’t demand very much, and may thus lose out in competition with others whose needs may be a good deal less acute, but whose entitlements are stronger. (Sen, 1981, p. 161)

This perspective has pushed international finance organizations and national governments to consider not only the macro-perspective of food supply, but also the micro-level of social, political, and economic relations that circumscribe access to food.

In 1996, at the World Food Summit, governments affirmed a commitment to halving the number of hungry people by 2015. Nevertheless, between 1995 and 2005, the number of chronically hungry people in developing countries increased from 800 million to 852 million—an increase of nearly 5 million per year (Windfuhr & Jonsen, 2005). Such statistics have led to a search for new approaches and new understandings of the causes of hunger, and they have led a number of local social movements, civil society organizations, and nongovernmental organizations to call for a new focus on “food sovereignty” rather than “food security.” The food sovereignty approach adds renewed emphasis to Amartya Sen’s call for attention to questions of access to productive resources, political power, and life possibilities in addition to technical support for food production. Specifically, the call for food sovereignty draws critical attention to the emphasis—originating from wealthy countries—on industrial agriculture, livestock production, and commercial fisheries, rather than a focus on the needs of the smallholder farmers, pastoralists, and fishers (who comprise at least half of hungry people) for secure access to productive resources (Windfuhr & Jonsen, 2005).

Today, interventions to eradicate hunger seek to address four areas of concern: (a) agriculture (increasing food production); (b) nutrition (increasing the nutritional quality of food consumed); (c) poverty reduction (increasing access to health care, education and other social services); and (d) democracy (increasing access to decision-making, information, and productive resources). “Food security” initiatives have generally addressed just two of these types of issues: agriculture and nutrition. The movement for “food sovereignty,” however, generally expands this traditional focus to also mandate attention to issues of poverty and democracy.

For example, La Via Campesina, an international social movement of self-identified peasants, small- and medium-sized producers, landless, rural women, indigenous people, rural youth, and agricultural workers, composed a list of seven tenets that illustrates the food sovereignty approach’s focus on poverty and democracy:

1. Food is a basic right;
2. Genuine agrarian reform must give landless and farming people ownership and control of the land they work and revise land rights to be free of discrimination;
3. Care and use of natural resources must be sustainable. Efforts to do so must be free of restrictive intellectual property rights and must rely on security of land tenure, healthy soils, and reduced use of agro-chemicals;

4. Food is first and foremost a nutritional source and only secondarily an item of trade. National agricultural policies must prioritize production for domestic consumption and self-sufficiency;
5. Food sovereignty is undermined by multinational corporations' control over agricultural policy and multilateral organizations;
6. Food must not be used as a physical or political weapon; and
7. Smallholder farmers, particular rural women, should have direct input into the formulation of agricultural policy at all levels. (Via Campesina, 1996)

In this paper, we take seriously the assertion by Paul Farmer and Nicole Gastineau (2009, p. 162) that “If the primary objective is to set things right, education is central to our task.” We build on the principle of food sovereignty to propose that school cultivation initiatives be restructured by attention to the politics and economics of hunger. In particular, grounding a school cultivation curriculum in the food sovereignty approach can incorporate conversations about the local organization of land rights, the sustainable and equitable use of resources, the contradictions of conceiving food as a right versus as a commodity, the global regime of food consumption and production, and the resolution of food conflicts into the agricultural and nutritional education which existing school cultivation programs have effectively strengthened.

School Cultivation in Global Perspective

In the industrialized countries of regions like Europe and North America, school cultivation initiatives have generally taken the form of what is known as garden-based learning. This approach is strikingly different from those initiatives pursued historically in developing contexts in Africa, Asia, and South America, which, with little success, have aimed to address school food security issues for the rural poor. In this section, I explore these differences.

The main distinction between approaches to school cultivation can be illuminated through the terminology used to name them. “School farming” has prevailed in developing contexts, while “School gardening” has been more common in Europe and North America. Popular understandings of the difference between the two seem to turn on aspects of scale and intent. Whereas gardening is generally done on a smaller scale as a pleasurable activity and for personal consumption, farming is generally understood to take place on a larger scale for the production of goods to sell or trade.

This terminological distinction marks the generally subsistence-oriented approach to school cultivation taken through what has been called “school farming” in developing contexts to date, and the emphasis on pleasure, experience, and learning pursued through “school gardening” in more privileged settings. In this paper, we use the term “school cultivation” to refer to both types of activity. Our aim in doing so is, by resituating planning and policymaking for both into the same discursive realm, to confront the “double standards” (Farmer & Gastineau, 2009, p. 155) set for school cultivation among the rich and the poor and to acknowledge the global order that has contributed to this curricular divergence.

In more privileged national settings like the United States school cultivation has taken the form of “garden-based-learning,” an approach that emphasizes the development of the whole individual through a cultivation curriculum. In the United States, garden-based learning has some of its strongest roots in the United States Department of Agriculture’s youth organization 4-H, which since the beginning of the twentieth century, has aimed to develop the “heart, head, hands, and health” of millions of young people in America, who “learn to do by doing” (www.4-h.org). Since the 1990s, the practice of garden-based learning has expanded to address increasing disparities in wealth and access to healthy food and to address “lifestyle issues” among the urban poor and the suburban middle class. Specifically, these efforts have aimed to counter the alienation of urban and suburban children from nature and agriculture, to promote environmental and agricultural sustainability, to encourage children to make better nutritional “choices,” to “teach the joy and dignity of work” and to “green” school grounds through experiential education (Desmond, Grieshop, & Subramaniam, 2004). In California alone, where the state’s Department of Education launched a “Garden in Every School” program in 1995, 3000 school garden programs are underway.

Some common assumptions embedded in garden-based learning are illustrated in the quote below, derived from a description of school garden activities in the United States:

In school garden programs that grow edible produce, students generally learn science and nutrition concepts relevant to growing food while they work in the garden. Students harvest the vegetables and, in some programs, learn to cook nutritious meals from the harvest. Some programs include a “farm-to school” component in which the school purchases produce from local farmers for its lunch program, and students visit farms to understand where food comes from and how it is grown . . . In food-growing garden programs, one central health-related goal is to stimulate youth—so many of whom subsist on diets heavily based on packaged foods—to increase their consumption of fresh produce. Students also get some exercise as they engage in

weeding, digging, and other manual labor associated with garden maintenance. (Ozer, 2007, p. 847)

The school garden mandate in this context is to expose children to healthier “farm-fresh” foods, to which they usually do not have access, to expose them to cooking (an activity assumed to be foreign to them; see Lalonde, this volume), and to “get some exercise” to counteract what is assumed to be their usual sedentary lifestyle.

In sub-Saharan African contexts like rural Tanzania, however, concerns about packaged foods, a lack of opportunity for food preparation, and a lack of opportunity for exercise are not relevant rationales for school cultivation. Rather, as we illustrate below, school cultivation activities have centered primarily on what is known as “school-based food production,” with a secondary emphasis on agricultural education and on the cultivation of national values, with little or no emphasis on other learning objectives. Despite this unity in general purpose, these aims have been put to a variety of political and economic ends in colonial, post-independence, and (in the Tanzanian case) post-socialist eras of schooling. Below we return to the Tanzanian context as an example of the long and winding history of school cultivation on the African continent.

Today, in an era marked by a global policy mandate for Education for All (<http://www.unesco.org/en/efa/efa-goals/>)—when access has increased, but enrollment and class size have skyrocketed—the cultivation of school food to meet the breakfast and lunch needs of students meets with very little success. School gardens can produce only a fraction of the quantity of food needed by students for meals at school. Misappropriation of the harvests of school gardens also has been an issue. The Food and Agriculture Organization states that misuse of school harvests and student labor has been relatively common, noting that “in the reality of most rural schools, economic concerns often take precedence over teaching objectives, as poorly paid and unmotivated teachers are tempted to use the proceeds . . . for themselves” (FAO, 2004, p. 10).

So if the old model of school farms contributes little to its intended aims, what educational, political, and economic purposes have school farms served in Tanzania? What can and does school cultivation accomplish in terms of its educational, political, and economic aims? To answer this question, we contrast the international policy vision of school gardens with the history and current practice of school cultivation in Tanzania.

The New School Garden

In parts of the world facing chronic hunger and malnutrition issues, school farms are being re-conceived as school gardens and partnered with school lunch programs to form a new key component of rural food security policy. In Tanzania, the World Food Programme (WFP) requires the cultivation of a school farm as part of the community contribution to its Food for Education (FFE) school breakfast and lunch program. The Tanzanian Ministry of Education and Vocational Training (MOEVT), meanwhile, has expanded the required size of school farms, and village governments have increasingly enforced this mandate, often relocating families who find their homes and farms inside the boundaries of the newly revised borders (a common practice noted by Phillips in Singida region between 2004 and 2006). The U.S.-based youth organization 4-H has launched and is expanding a school garden program in Tanzania. And with the increase in private education models imported from Europe and North America, garden-based learning techniques are the latest trend in elite urban Tanzanian contexts (the Hekima Waldorf School in Dar es Salaam is one example).

An international consensus on the effectiveness of school cultivation for student learning is reflected in the United Nations' Food and Agriculture Association's endorsement and their recently published Concept Note (2004) on school gardens. The FAO vision emphasizes school gardens' potential to serve as learning laboratories and as part of a long-term strategy to address food insecurity through improving basic education around issues of nutrition and the environment and introducing improved agricultural techniques of sustainable food production. This vision builds on the garden-based learning model to center learning objectives, while also maintaining that gardens can contribute in long-term ways to school and community food security. The FAO school garden vision is centered on a value of active learning, represented in a quote from Confucius that heads the FAO school garden website: "I hear and I forget, I see and I remember, I do and I understand" (FAO, 2010).

The new school garden, according to the FAO, should be a cultivated area near a primary or secondary school that can both assist learning and produce food and/or income for the school. It should

help students learn about food production, nutrition and environment education and personal and social development related with basic academic skills (reading, writing, arithmetic) while generating some food production to supplement school feeding programmes. (FAO, 2004, p. 4)

Specifically, the garden should address the following learning objectives: increase the relevance and quality of education by introducing important life skills; help students to start and maintain home gardens; encourage the consumption of fruits and vegetables; offer active learning experiences by linking gardens with math, science, reading and writing; attract children and families to school by addressing topics relevant to their lives; improve attitudes towards agriculture and rural life; teach about environmental issues and nutrition; and give students survival tools for times of food shortage (p. 5). In addition, a school garden should also familiarize students with methods of sustainable agriculture; promote income-generation activities; improve food availability and diversity; enhance the nutritional value of school meals; reduce the incidence of malnutrition among schoolchildren; increase attendance; and compensate for the loss in the transfer of life skills from parents to children due to the impact of HIV/AIDS and increase in child-headed households (p. 5).

The FAO's (2004) Concept Note qualifies these ambitious aims by noting that the learning objectives of school gardens must be supported by adjustments in the national curriculum, the production of training and curricular materials, teacher professional development, and sufficient funds for these endeavors. It also acknowledges that the economic contribution of school gardens may be minimal. The significant economic and nutritional effects of school gardens, according to the Concept Note, will be in their "multiplier effect" as students learn academic subjects and life skills and help their parents and families start home gardens that diversify and enhance agricultural production (p. 8). Though the Concept note is ambitious in its educational objectives, its overall aim appears to be to fill the knowledge and skill deficit of rural people without questioning the political, social, and economic orders that construct and produce those deficits in the first place.

The Historical and Current Context of School Cultivation in Tanzania

The idea of producing food in schools and learning about food production in schools symbolically resonates with the concern for food security and sustainable development that characterizes donor concern in sub-Saharan Africa. Yet neither the literature on school cultivation nor our research-based understanding of what is happening in rural Tanzanian school farms indicates that such an educational vision will be easily adopted in rural schools, and if it is, that it can alter the conditions of hunger. In Tanzania the *shamba la shule* (or school farm) has long played an important role in most primary and secondary schools. These school farms were not integrated into the curriculum. Rather than supporting student learning, school farm

activities in Tanzania have tended to serve the economic ends of producing harvests that would supplement school meals. During the postcolonial period of Tanzanian Socialism (1967 to circa-1985), they also served a political ideology concerned with bridging the divide between an educated non-farming elite and an uneducated agricultural populace. In the following section, we review this history of the *shamba la shule*.

School Cultivation in British Colonial Schooling (1920-1961)

In colonial Tanzania (then called Tanganyika), school farms emerged in conjunction with British schooling.² Schools relied on farms tended by their students for some, if not all, of the food served to boarding and non-boarding students. The colonial government mandated farming activities in government schools as a means of school self-support, whether in the form of food produced for student meals or funds raised by the sale of produce, livestock, or other cash crops that could support the running of the school. The government subsidized such produce with foods like palm oil and milk. Colonial school farms in Singida included the cultivation of crops such as sorghum, millet, cabbage, tomato, eggplant, cauliflower, and papaya (Tanzania National Archives E1/19). In addition to producing food for the school, students also learned agricultural techniques *kwa vitendo* (“by doing”) that administrators hoped students would take home with them. The school farm and the teacher farm were both to serve as a *shamba-darasa*—a farm classroom used to model modern farming. A colonial communication noted:

Because the school farm is for the purpose of lessons, it should be located close to the school. And the children should be taught especially Agriculture from first until fourth grade. The farm of the teacher should also follow the principles of good agriculture so that the children see that their farms and the teacher's farm have the same agriculture (Tanzania National Archives [TNA] E1/19)

Logs were expected to be kept for the farm that would track each agricultural method and the success associated with it. Such data included the dates of planting and second and third weeding, the date of harvesting, any detrimental factors that affected output (birds, animals, drought), and the measurement of the harvest obtained by each class and level (TNA E1/10 #33). Cattle husbandry was also common. In successful years, the school farm also yielded a profit for the colonial government: a portion of farm profits was paid out to the colonial government in taxes.

Colonial education policy required participation on school farms and in gardens not only from students, but also from the surrounding school

community, which was generally expected to contribute labor and manure (TNA E1 68/19/6 III). Yet there were strict rules that no labor was to be misappropriated for the personal gain of teachers. A memo from the Supervisor of Schools in the District Office of Singida to all headteachers addressed this issue, suggesting that such misuse of student labor was already occurring: "Making the students farm for the benefit of the teacher and not for the school, or renting the students out to do work for other people is not right, not even a little, and it is strictly forbidden" (TNA E1/10 #33). School cultivation, such reprimands communicated, was to benefit the British Empire, not shrewd teacher-entrepreneurs who were now successfully grasping the principles of production for profit that the British had worked so hard to inculcate (Phillips, 2009a).

In the colonial system, the few students who were able to complete schooling generally found themselves in positions of power and privilege with relation to their unschooled counterparts: as colonial administrators, schoolteachers, or church leaders. School farms, as post-independence leaders would point out, were cultivated during the colonial era as part of an education that served the colonial government and "the educated few," (TNA ACC 584 A3/38/I) not the community or the nation's many.

School Cultivation and Tanzanian Socialism (1961-1982)

In 1961, Tanzania achieved its independence peacefully under the leadership of Julius K. Nyerere, a former teacher who, at independence, became Tanzania's first president. By 1967, Nyerere was leading Tanzania along a new political and economic path of Tanzanian Socialism, or *Ujamaa*. Nyerere (1967) regretted the legacy of colonial education in his new independent nation:

. . . education now provided is designed for the few who are intellectually stronger than their fellows; it induces among those who succeed a feeling of superiority, and leaves the majority of the others hankering after something they will never obtain. It . . . can thus not produce either the egalitarian society we should build, nor the attitudes of mind which are conducive to an egalitarian society. On the contrary, it induces the growth of a class structure in our country. (p. 276)

Given these concerns, Nyerere sketched out a new vision for education in independent Tanzania with his Education for Self-Reliance Policy [*Elimu ya Kujitegemea*]. Education for Self-Reliance was embedded in a new political climate in which the percentage of the GDP dedicated to education more than doubled, going from 2.7 to 5.7 percent (Buchert, 1994). The policy rested on a

notion of school students as some of the nation's healthiest and strongest citizens, who not only failed to contribute to national development through their labor, but were consumers of the labor of older and less privileged people (Nyerere, 1967, p. 4).

In addition to concerns about school students' lack of contribution to national development during their education, Nyerere also worried about the social and experiential separation—produced by the colonial educational system—between an educated elite and those who “fed” them (through agriculture). The British system had privileged knowledge that was largely irrelevant to most Tanzanians and devalued that which a student could learn from his elders. By relying on strong local farmers as supervisors and teachers and making use of agricultural officers, Nyerere argued, “we shall be helping to break down the notion that only book learning is worthy of respect. This is an important element in our socialist development” (p. 5).

The school farm, for Nyerere, offered an opportunity for the nation to recover some of the national investment in these young people. He argued that teachers and students must be members of a social unit that parallels the family structure.

And the [school] must realize, just as [the family does], that their life and well-being depend upon the production of wealth—by farming and other activities. This means that all schools . . . must contribute to their own upkeep . . . 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 total national income . . . (p. 5)

Nyerere also emphasized the experiential learning opportunities for agricultural innovation embedded in the school farm:

on a school farm pupils can 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 . . . 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; the students will then understand what they are doing and why, and will be able to analyse any failures and consider possibilities for greater improvement. (p. 5)

One teacher interviewed in Arusha Town remembered Education for Self-Reliance as it was practiced in her peri-urban village, and the technical support that was available in the post-independence period.

When I was in school my school had a farm. We sold beans to buy pencils and supplies for school. Vegetables and fruits were grown. Two times each week I worked out on the farm as part of the 45 minute agricultural lesson. Schools in town where I studied got water from taps, but in villages students filled water in a river. The schools boiled corn for school lunch. Parents bought vegetables and fruits for not expensive prices. I made a natural pesticide which was soap and pepper put together overnight and put on the leaves of plants. We ate corn and beans each day for school lunch, and vegetables and meat once a week. It was nice to have an agricultural officer in villages who specialized in schools.

Through Education for Self-Reliance, primary school enrollment rose to 93 percent by 1980; adult literacy from 10 to 90 percent; life expectancy from 35 to 50 years, and by 1980, 79 percent of high level civil service positions had been “localized,” that is, transferred from British officials to Tanzanians. But not all post-independence officials shared Nyerere’s enthusiasm for active learning as the primary motivator for school cultivation. Many saw school farms primarily as sites for the application of innovative agricultural techniques developed elsewhere. Tanzania’s Director of Agriculture, for example, emphasized in 1967 that

experimentation should be left to people who are qualified to do so. [Education for Self-Reliance involves] teaching the pupils how to obtain the required inputs at the right place, right time, and right quantities. If this were done, I am convinced production would go up and the income would exceed that from salaried employment, thereby creating an incentive for the school-leavers to go back to the land. (“Farming Could Be Lucrative”, 1967)

The visiting Minister of Education emphasized to his Singida audience in 1975: “Education for Self-Reliance is not a ‘hobby’ nor an experiment, rather [its goal] is production” (TNA EDN 20/106). Likewise, the success of Education for Self-Reliance was touted in 1968 by Minister of Education Muhaji as “the psychological change of the students’ attitude towards manual work” (“New Form”, 1968). And the construction of a cattle dip was lauded in a national newspaper for “making students aware of their responsibilities to the community and the nation” (Students Build Cattle Dip, 1968). During Education for Self-Reliance, school farming and animal husbandry came to be valued by colonial administrators for their economic production and cultivation of “a value of work” (aims eerily similar to those of the colonial administrations (Phillips, 2009), not for the learning of academic subjects or the education of a politically active populace.

In many contexts, Education for Self-Reliance came to legitimize the practice of using students as work teams. Teams of students were often “rented

out” by schoolteachers to private citizens for work on farms or house construction. The profits, ostensibly, went to the school, but many people we interviewed noted that such profits likely were often enjoyed privately by the teacher. Rumors of misappropriation and corruption by village leaders and schoolteachers characterize the memory of Tanzanian Socialism for many people we spoke with in Singida, Lindi, and Monduli districts. That said, the principles of Education for Self-Reliance and the intention of Nyerere are still held up as political and economic ideals by many rural Tanzanians.

School Gardens in the Context of Market-Based Reform and Education for All (1982-Present)

By the early 1980s, all of Africa was caught up in the effects of a global economic recession, and Tanzania’s macro-economic challenges had intensified. The World Bank and the International Monetary Fund (IMF) stepped in as lending institutions for Tanzania and other severely indebted countries and declared Tanzania’s level of government spending on education and other social services impossible to sustain. In 1982 the Tanzanian government instituted the Structural Adjustment Programme (SAP) that the international lenders had set as a condition for aid. The values of access and equity were de-emphasized in educational policy (Buchert, 1994). While some economic recovery was demonstrated as a result of structural adjustment, the impacts on education and the rest of the social sector were severe. School enrollment plummeted with the implementation of school fees. Poverty and illiteracy increased. There is little evidence of explicit national policy on school cultivation during this time. The responsibility to feed students, like that of paying fees, fell on families, many of whom withdrew their students from schools due to an inability to pay.

In the wake of the 1990 United Nations “World Conference on ‘Education for All’” in Jomtien, Thailand, the goal of universal primary and secondary education became part of Tanzania’s broader vision of poverty elimination by 2025. In 2001, the government of Tanzania eliminated school fees for primary schools, and in 2005 the government ordered the construction of a secondary school for every ward (a grouping of 4-6 villages each containing its own primary school) to increase opportunities for education. Both goals were largely realized by 2010, though not without great cost to communities who were largely responsible for fulfilling the policy through mandated contributions of labor and materials. Though enrollment statistics show over one hundred percent enrollment, attendance rates in Tanzanian primary schools suggest that students face other barriers to

education. Acute and chronic hunger issues and rote pedagogical style have been noted as significant (Twaweza, 2010; WFP 2010).

Though little research has been carried out on the contemporary practice of school gardening in rural Tanzanian schools, a 1999 study of classroom interaction in 4 districts by O-saki and Agu has relevance to the major pedagogical issues around school farms. O-saki and Agu found that, in general, teaching styles in these schools were orthodox. Teachers tended toward “chalk-and-talk”—lecturing, rather than providing the opportunities for active learning that proponents of school garden curricula tout. School cultivation activity cited focused mainly on watering gardens and harvesting produce—with no attempt to integrate the activities into the academic curriculum (pp. 108-109).

Such tasks, O-saki and Agu quietly assert, “smack of child labour” (p. 109). O-Saki and Agu noted that in the rural schools, issues were more severe: “teachers took class work less seriously and focused more on using the children as cheap domestic and school labour, which depleted the children’s energy . . . And where girls did such work for most of the school time, it eliminated their motivation” (p. 113). Some children even complained about the teachers’ “failure to account for income and expenditure (relating to school self-reliance harvests produced by the children).” It was not simply that their school farm work contributed little to their learning, but that in many cases their labor did not even contribute to their diet. O-saki and Agu concluded that “Some teachers may be wrongly interpreting [Nyerere’s] Education for Self-Reliance philosophy in relation to education and work” (p. 115).

In Summer 2010, we followed up on these themes raised by O-saki and Agu, conducting interviews and focus groups in two schools in Rural Lindi, one school in rural Monduli district, and one school in Arusha town. We spoke with teachers, villagers, and community members about school cultivation in terms of what they referred to as “school farms” [*mashamba ya shule*—larger plots of land planted with staple crops like maize and beans—and “school gardens” [*bustani za shule*] – smaller plots planted mainly with fruits and vegetables that often require watering by hand to supplement seasonal rains.

We found that only the Arusha town school had an active school garden or farm, sponsored by 4-H, who offered technical assistance and curricular support. One of the schools in Rural Lindi had planted orange and palm trees and sold their fruits and, rather irregularly, planted and harvested maize and beans. All of the rural schools cited—as reasons for their lack of garden or farm activities—challenges with recent droughts or irregular rains, lack of access to water for irrigation at the school, pests such as birds or livestock destructive to crops, teachers’ lack of capacity to take on a school

cultivation curriculum, and/or inadequate time in the school day for school cultivation activities given the demands of preparing for national examinations. All sites' school meal programs benefitted from school cultivation, but they also acknowledged that harvests did not contribute significantly to a meal program. One kindergarten teacher in Arusha noted:

It is quite unadvisable for kids to grow food for lunch as in the past because these days schools have no farm land. In the past kids grew food for lunch though the food lasted for quite a short period. As I have said before, these days schools have not enough land to farm and this makes a big change. The best thing is for the government to contribute to schools and parents as well if they really need kids to have lunch rather than giving cabinet members such big salaries, luxurious cars and so many other incentives for nothing.

All in all, village officials, teachers, and community members in all three regions generally associated school cultivation with the production of school food or cash crops that would financially support the school. As one Lindi parent noted:

We don't have this plan of farming for learning. We farm for the purpose of school funds only. This plan of encouraging learning has been started this year through the government policy of "Agriculture First," but we haven't started it yet. We think we will start next year because we are already late.

In the rural Arusha school, farms were sometimes being used to teach *kwa vitendo*—to teach agricultural or biology education using active learning techniques. One Arusha teacher noted: "for example, when we teach the fertilization of flowers we send the students out to look at the flowers . . . they see the ravines and the difference when there is a drought and when they cut trees."

In general, however, what people could "learn by doing" through school farms/gardens was generally understood by teachers and parents to be only agriculture; for example, students could learn about the use of manure and issues such as soil erosion and environmental degradation. There was little recognition that farms and gardens could be used to teach other parts of the national curriculum, like science, mathematics, or writing skills, through active learning techniques. Rather, the notion that a school farm or garden could also be a classroom was limited to people's familiarity with the *shamba-darasa* (literally, the farm-classroom), the term for the model farm that is used to teach villagers improved farming techniques.

Both teachers and parents perceived that the use of school gardens to teach the curriculum and/or cultivate school food would compete with

teachers' time spent preparing students for exams. There seemed to be considerable concern that such activities would interfere with students' performance on national exams, rather than supporting and enhancing students' understanding of material. However, school cultivation that would provide for a school lunch for students, if not too time-consuming, was seen as a worthwhile use of students' time. Parents, teachers, and village officials, though, confirmed that both student labor and the land available for school cultivation are not enough to sustain a school food program.

One recent shift we noted is the renewed government emphasis on agriculture as a means to development. Many cited President Jakaya Kikwete's (president since 2005) new slogan, "Agriculture First," as testament of a return to a more essentially Tanzanian way of life, against the grain of advice from powerful international governments. One Arusha town teacher observed:

Now agriculture has changed, but the government is encouraging the farmers to start farming like they used to because they see we have lost out. Farmers have become increasingly poor and they have no money and no business, but there are farmers who are agreeing now to return to the ways of the past. Others say forget it, we've had enough. The government is persuading them by giving help that might help them return to our initial agriculture. Because CCM [the ruling party] is saying "Agriculture First." This is similar to Nyerere's time, when he insisted "Agriculture is the backbone of the nation." This is true because each person depends on agriculture: every person needs to eat, for without eating there is no life.

Some teachers and parents we spoke with expressed concern about the perceived return to agricultural education that a renewed emphasis on school cultivation might represent. In Arusha, elders and community members had far less interest in their children learning agriculture than their learning the national curriculum. Their main interest was that their children perform better on national examinations so that they could have access to opportunities for secondary education. Teachers and parents saw this path as more fruitful than one based solely on farming and herding, for they could "sit in an office and receive a salary."

In the Lindi schools, other "self-reliance" activities were also carried out. Students collected firewood and palm fronds to sell for the schools' profit (palm fronds are used to re-thatch house roofs). Based on concerns raised in the research and policy literature (FAO 2004; O-saki & Agu, 1999), we asked parents if they had any concerns with their children doing "farming work" at school. Most parents had no problem if the time spent was not excessive and if the children themselves would materially benefit from it through school meals or improved supplies and services. One noted,

The children should get a certain percentage of the money; they can use it to pay for school supplies, shoes, and save for secondary school. It is fair to give kids money (from selling school produce) when they are hungry; otherwise they will learn to steal. The kids should get money, produce, or school lunch. Parents should pay a cheap price to buy produce so parents can buy the produce to feed their families and the school can also get money. School lunch is very important because kids can't learn on an empty stomach.

But many did express reservations about who might benefit from the production of food on school farms, due to possible misappropriation of harvests and profits by teachers. "It is necessary that there is good supervision;" several of them insisted in a focus group interview, "there must be a good plan."

Discussion

Notions of self-reliance have framed diverse political, economic, and social projects in Tanzania's history. These ideas have had significant effects on the forms education has taken, and the ends that it has served. During colonial rule, all school learning was oriented toward maximizing economic productivity for the colony, that is, educating citizens to carry out the colonial agenda through a transfer of knowledge, skills and, ultimately, values that would allow Tanganyikans to be productive colonial subjects requiring as few further inputs as possible. Colonial administrators sought for schools to be self-sustaining, and the school farm's role was to contribute to this aim – through the agricultural curriculum and through its economic contribution to school self-support. This would be a far cry from self-reliance in the Nyererean (1967) sense: learning to labor was meant to contribute to an overall surplus for the Empire's profit and expansion.

During Tanzanian Socialism school learning was also geared toward economic productivity, but toward a very different notion of Self-Reliance. Self-Reliance for Nyerere (1967) meant national sovereignty (independence from world economic powers) and the achievement of modern services (health care, education, electricity, etc.) through small-scale action and organization. Such self-reliance would grant Tanzania true—not simply nominal—political and economic independence from former colonial and other world powers. A challenge to this objective became keeping up with, or restructuring, the aspirations, consumer tastes, and value of economic, political, and educational hierarchy developed during the colonial period. Nyerere's Education for Self-Reliance tackled such challenges directly through an educational emphasis on the development of civic virtue, egalitarian sentiments, and a value of national

social cohesion and identity. Collective work on school farms, specifically by those en route to privileged government employment (i.e. students), provided the mechanism through which these shared values could be developed. Yet the actualization of this project often took very colonial forms – emphasizing the value of work and learning as “banking education” (Freire 1970)—the transfer of knowledge and skills from an educated and political elite to the common man. In practice then, labor was emphasized over learning.

In this first decade of the new millennium, learning is still aimed toward national economic productivity but also toward the development of a democratic market economy. There is a tension here between understanding education as a “human right” (as it is framed in Education for All) yet one that is still accessed and differentiated through market forces—through, for example, the capacity to purchase school uniforms and pay mandatory school “contributions”; to access the social and political capital necessary to gain a secondary school placement where teachers, books, and training are sufficient; or to pay private school tuition for an education that offers the linguistic training needed for promotion. “Self-Reliance,” a concept still invoked today by politicians, now stands more for a neoliberal emphasis on individual responsibility and pulling oneself up by one’s bootstraps than as a postcolonial cry of self-determination and independence. Self-reliance and the cultivation of school farms and gardens has been incorporated into an educational development discourse on sustainability. Yet the aim of such sustainable development initiatives as school gardens seems to be that rural African communities become productive self-supporting entities requiring as few further inputs from outside forces as possible—an objective not all that different from that of colonial education. One elder we spoke with in Lindi region articulated his frustration with Self-Reliance as a political objective in today’s world: “Self-Reliance has its good points, but its bad points too. Because if you say you are going to depend on yourself, but there’s no certainty that you can, then it is no good.” Rural Tanzanians are painfully aware of being subject to and at the whim of market forces at the same time as they are continually asked to stand on their own two feet and “help themselves.”

A central concern that has emerged in the literature on school cultivation in developing contexts is that of child labor, a subject we would like to briefly address here. Anthropologist Kristen Cheney (2007) offers an important critique of the ambiguity of notions of childhood in postcolonial Africa. She writes that the global rights discourse constructs an understanding of the “universal child” that is typically informed by Western values and seeks to “free children from the negative constraints of their own traditional cultures, often seen as negative and ‘antimodern’” (p. 44). Education for All, likewise, sets children apart from their own communities where they “might

otherwise be integrated in vital ways—in the labor force, for example” (p. 44). Yet, she goes on to note, “postcolonial economic decline only entrenches persistent African cultural notions that children are essential family resources, not individuals endowed with rights and freedoms independent of family and community” (p. 56). The parents we spoke to are indeed pragmatists; their children must learn sooner rather than later to support themselves and contribute to the livelihood of their family. This seems an important parental value to respect in the conceptualization and implementation of school cultivation initiatives. Our hope is that strengthening the political position of students and their parents with respect to teachers, and of rural schools with respect to a government sworn to serve them will curb misappropriation of children’s labor and school resources. Students should gain from their educational labor and a laboring education in both material and intellectual ways.

Achieving this, we argue, can occur through development interventions such as the development of school cultivation programs, but not necessarily in the form in which they are currently conceived. The FAO’s school gardens, for example, center the dual objectives of, first, agricultural improvement through the transfer and application of technical knowledge and, second, nutritional enhancement through learning the principles of nutrition and cultivating new tastes. Education is also emphasized but is connected more to the goal of certification and the pragmatic realities of passing national examinations in an age of competitive education than creating educated persons and citizens. Local and life-relevant skills are also emphasized, but a familiar overall objective remains: filling the knowledge and skill deficit of rural people without questioning the political, social, and economic orders that construct and produce those deficits in the first place.

FAO reports themselves acknowledge inadequacy of technical development, and the importance of “empowerment”:

The ‘agriculture-only model of rural development’ has proven inadequate to address poverty reduction, rural development and sustainable natural resources management. The latest thinking and good practices in such domains indicate that the *empowerment* of poor people, policy and institutional reforms in the rural sector leading to participation of stakeholders needs to be the starting point . . . (Gasparini, 2000, para. 5; emphasis added)

Yet despite this acknowledgment, discussions of *power* in development processes are still avoided. The FAO exemplifies this contradiction in policy circulars such as the School Gardens Concept Note. There is no indication of how “empowerment” can and will take place through its vision for garden-based learning. It is understandable that international organizations do not

want to address political issues that can be seen to impede on national sovereignty. Yet as nongovernmental and civil society organizations pointed out during the 2002 “Forum for Food Sovereignty,” not only is there a lack of political will to combat hunger, but also

too much political will is used to promote policies that actually exacerbate hunger . . . It is clear that strategies to overcome or reduce hunger, malnutrition and rural poverty need to both promote new policies as well as challenge the national and international policy environment that hinders access to productive resources or to an income sufficient to feed oneself. (Windfuhr & Jonsen, 2005)

We argue for the need to situate school cultivation initiatives within processes that, rather than simply incorporating local decision-making processes into an end or trajectory pre-established by the global development industry, instead build on a dialogical process between teachers, agricultural experts, students, community members and leaders. This process should situate planning for school cultivation and rural development in (1) a historical contextualization of school gardens in African contexts and (2) a critical appraisal of local and global systems of food production, distribution, and consumption. Questions to be debated could include:

- As rural food producers, how and why are we often the first to go hungry? (Phillips, 2009b; Shipton, 1990). What are the economic, historical, and political conditions that construct us as “food insecure” in the first place?
- How can we use school gardens to not only disseminate and practice technical knowledge, but to reshape the conditions of our poverty?

Such a critical approach to addressing issues of poverty and democracy as they relate to world distribution of food should not be limited to school cultivation initiatives in developing contexts. Rather, in this global era in which it is clear that we occupy not different food worlds, but the same one, school cultivation initiatives in the Global North should be embedded in such a food sovereignty framework as well. For, in Paolo Freire’s words, education can either function “as an instrument that is used to facilitate the integration of the younger generation into the logic of the present system and bring about conformity to it, or it becomes ‘the practice of freedom’ the means by which men and women” and, we would add, boys and girls “deal critically and creatively with reality and discover how to participate in the transformation of their world” (Freire, 1970, p. 15).

Notes

1. This summer 2010 research consisted of site visits to school communities in Lindi Rural and Monduli districts, using formal (semi-structured), informal, and focus group interviews with parents, village officials, and village elders regarding school gardens.
2. After the German defeat in World War I, a newly formed League of Nations handed control of Tanganyika over to Great Britain in 1920. It was missionaries and the British colonial regime who introduced formal schooling into Tanzania. Britain ruled Tanzania until independence in 1961.

References

- Agriculture and Natural Resources Team, 2004. *Agriculture, Hunger and Food Security*. London, Department for International Development.
- Cheney, Kristen (2007). *Pillars of the Nation: Child Citizens and Ugandan National Development*. Chicago: University of Chicago Press.
- Desmond, D., Grieshop, J., & Subramaniam, A. (2004). Revisiting garden-based learning in basic education. Rome, Food and Agriculture Organization.
- Farmer, P. and N. Gastineau (2009). Rethinking Health and Human Rights: Time for a Paradigm Shift. *Human Rights: An Anthropological Reader*. M. Goodale. West Sussex, Wiley-Blackwell: 148-166.
- Farming Could be Lucrative. (1967, April 13). *Standard*, p. 5. TNA A3138 #92.
- Food and Agriculture Organization. (2004a). *School Gardens Concept Note: Improving Child Nutrition and Education through the Promotion of School Garden Programmes*. Rome, Food and Agriculture Organization.
- Food and Agriculture Organization. (2004b). *The State of Food Insecurity in the World 2004*. Rome.
- Food and Agriculture Organization. (2010). "School Gardens Website." Retrieved October 1, 2010, from <http://www.fao.org/schoolgarden/>

- Freire, Paulo (1970). *Pedagogy of the Oppressed*. New York: Herder & Herder.
- Gasperini, L. (2000). *From Agricultural Education to Education for Rural Development and Food Security: All for Education and Food for All*. Rome: Food and Agriculture Organization. <http://www.fao.org/sd/exdirect/exre0028.htm>
- Gwekwerere, B., J. Zesaguli, et al. *Designing school gardens in East Africa for learning about biological, chemical and agricultural sciences*. East Lansing, Michigan State University.
- Hodgson, D. (1996). *Once Intrepid Warriors: Gender, Ethnicity, and the Cultural Politics of Maasai Development*. Bloomington, Indiana University Press.
- Mamuya, C. M. (2004). *Overview of Nutrition and School Feeding: Status of Children in Tanzania*. Dar es Salaam, Tanzania Food and Nutrition Centre.
- National 4-H Council. (2010). "4-H Home Page." Retrieved October 1, 2010, from <http://www.4-h.org/>.
- New Form: Public will be Given Voice. (1968, August 13). *Standard*, p. 5. TNA ACC 584 EDG #73.
- Nyerere, J. (1967). *Education for Self-Reliance*. Dar es Salaam Tanzania, Government of United Republic of Tanzania.
- O-saki, K. M. & A. O. Agu (2002). "A Study of Classroom Interaction in Primary Schools in the United Republic of Tanzania." *Prospects* XXXII(1): 103-116.
- Ozer, E. J. (2007). "Effects of School Gardens on Students and Schools: Conceptualization and Considerations for Maximizing Healthy Development." *Health Education & Behavior* 34(6): 846-863.
- Phillips, Kristin (2009a). *Building the Nation from the Hinterlands: Poverty, Participation and Education in Rural Tanzania*. Doctoral dissertation, University of Wisconsin-Madison.

- Phillips, Kristin (2009b). Hunger, Healing and Citizenship in Central Tanzania. *African Studies Review* 52(1): 23-45.
- Sen, A. (1981). *Poverty and Famines: An Essay on Entitlement and Deprivation*. Oxford, Clarendon/Oxford University Press.
- Sen, A. (1999). *Development as Freedom*. Oxford, Oxford University Press.
- Shipton, Parker. "African Famines and Food Security: Anthropological Perspectives." *Annual Review of Anthropology* 19 (1990): 353-94.
- Students Build Cattle Dip. (1968, August 2). *The Nationalist*, p. 8. TNA ACC 584 EDG #57.
- Tomlinson, M. (2007). School Feeding in East and Southern Africa: Improving Food Sovereignty or Photo Opportunity. Harare, Regional Network for Equity in Health in Southern Africa (EQUINET).
- Twaweza (2010). Malnutrition: Can Tanzania afford to ignore 43,000 dead children and Tshs 700 billion in lost income every year? Dar es Salaam.
- United Nations (1975). *Report of the World Food Conference*. Rome: New York, November 5-16, 1974.
- Via Campesina (1996). "The right to produce and the access to land. Food Sovereignty: A Future without Hunger", Rome; November 11-17 <http://www.voiceoftheturtle.org/library/1996%20Declaration%20of%20Food%20Sovereignty.pdf>.
- Windfuhr, M. and J. Jonsen (2005). *Food Sovereignty: Towards Democracy in Localized Food Systems*. Bourton-on-Dunsmore, Rugby, Warwickshire, ITDG Publishing.
- World Food Programme (2006). *Country Programme—United Republic of Tanzania 10437.0 (2007-2010)*. Rome.