

EDUCATION IN DEVELOPING COUNTRIES - A CHALLENGE TO TEACHER TRAINING

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In most of the developing world, population is increasing faster than the available supply of food. If present trends continue, food shortages and even famines are predicted in wide areas, affecting hundreds of millions of people in the next two decades. The Food and Agriculture Organization of the United Nations has a large staff of experts working urgently on its "indicative world plan" to identify the dimensions of the problem on a world-wide basis and postulate some courses of action. The task of gathering data and making projections alone is immense, and this aspect of the work is not expected to be completed for many months. Arthur T. Mosher¹ gives a clue to the magnitude of the problem in the following statement: "To feed the additional millions being added to the world's population each year, and to improve somewhat the present inadequate amount of food per person, will require faster agricultural development in the next two decades than almost any country has ever achieved in the past."

Despite extensive efforts by both multilateral and bi-lateral aid-giving agencies, the situation is deteriorating rather than improving. Although large amounts of assistance have gone into agricultural development, one factor has been that the recipient countries themselves have sought to industrialize and have requested the lion's share of assistance for efforts aimed at industrialization. Aside from direct investments in industrialization, most of the educational effort -- the crucial business of upgrading human resources -- has also been aimed at the urban/industrial sector of the developing countries. And yet, increased productivity and increased earnings from agriculture are essential to pay the costs of industrialization. Industries must have markets for their products, and so long as agricultural productivity remains low and farmers' incomes correspondingly low, there is not enough purchasing power to constitute a mass market, and domestic industry will be retarded in its development.

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¹/ A.T.Mosher, Getting Agriculture Moving, published for the Agricultural Development Council, Frederick A. Prager, New York.

Urbanization is an important phenomenon associated with development, and "rural exodus" as it is referred to by some students, tends to drain the able manpower so essential to rural progress away from the rural areas. Mosher also points out that no matter how rapidly countries seek to industrialize, the total number of farmers required will not soon decrease. In order to retain the talent necessary to progress, it is essential that rural areas be made more attractive in terms of economic and educational opportunity and to procure parity of living standards for rural people as compared to other socio-occupational categories. The United Nations Educational, Scientific and Cultural Organization has assembled a world-wide panel of experts whose report emphasizes this need. Until effective methods are employed to make farming and rural living more attractive, rural exodus will continue and the world food situation continue to worsen.

The situation would appear hopeless were it not for the fact that the existing knowledge and technology of agriculture is sufficient to resolve the world food situation. What is lacking is an effective strategy for its employment. The majority of the people of the developing countries are rural and gain their livelihood from farming. Even if rapid industrialization were possible, most of them and their children will live out their lives in the rural environment. These factors point to the need for a programme of rural education, the aim of which should be to enhance the ability of rural people to cope with their environment, which includes enabling them to increase production through new techniques and improved farm and home management.

Education in the rural areas of developing countries is typically sterile and formalistic. It is usually modelled on an educational system transplanted from a more developed country, without regard for the differences in educational aims arising from the differences in the socio-economic needs of the two cultures.

The present world food situation and the status of farmers and rural people in the developing countries is testimony that the methods used at present for transmitting new agricultural technology to the farming populations are ineffective. The national and international resources available to ministries of agriculture for extension and promotion of programs are inadequate to bring about the rural transformation which Professor Harbison says is necessary to bring about sustained economic development. Productivity in the traditional sector must be increased by introduction of applicable elements of new technology. Efforts at agrarian reform, schemes to expand production and agricultural developments typically fail from lack of a sufficient base of technical personnel with the correct spectrum of relatively simple agricultural skills and knowledges. Traditional rural populations feel trapped by their environment, they do not understand nor believe that they can improve their lot. Western man, chiefly in Europe and North America, has achieved a surplus of food and goods by altering his environment to serve his ends, as contrasted to the developing countries in which man adjusts to his environment.

Educational efforts have been aimed at the modern sector of the economy and at too high level. Such education as has reached rural children has been preparatory education for higher levels of education which the vast majority of children never reach. The result has been to disqualify them for productive occupations available to them and desperately needed by the economy. Even efforts at agricultural education at upper elementary and secondary levels, in the context of scarcity of any kind of education, often leads to employment as government clerks in tasks not related to agriculture.

It is clear that more and different resources and techniques to upgrade the intellectual and operative capabilities of the rural population must be marshalled if mass poverty and actual starvation are to be eventually eliminated. New institutions and more effective use of existing institutions must be vigorously developed. Agricultural education for both children and adults to offer organized programmes of instruction dealing with skills and understandings aimed at solving farmers' problems could be offered through community schools, for example. Such a move could mobilize local resources to supplement those available from national and international sources. An appropriate instructional program would not be confined solely to agriculture or farming techniques, but would deal with related social, economic, communication and family spheres as well. These and many other elements are part of the local environment, but the point is they must be directed at the needs of the rural population.

Rural transformation and agricultural development cannot be brought about by educational programs alone. Transportation must be available; systematic, efficient markets must be developed; new "inputs" in the form of improved seeds, pesticides and fertilizers must be made available locally. Incentive must be available to the farmer that assures him an equitable share of increased production and an opportunity to achieve increased security and some amenities of life for him and his family. These factors must be integrated in a farm and home management system that is in agreement with his pattern of aspirations and is therefore satisfying. Ambitious public programs, as well as private sector efforts, to provide the conditions and services implied above, even if well conceived, usually founder on the shoals of inefficiency arising from lack of sufficiently trained field-level personnel. A farm credit program administered by disinterested, albeit well-educated government clerks in a distant capital city is doomed from the beginning. An alert, interested field staff that is in daily contact with farmers and that understands their problems and ways of thinking and knows something about the technical side of agriculture is essential to success. Even illiterate farmers are capable of making shrewd decisions about assuming risks and making investments in new production factors. But a school program that helps the farmer learn to quantify his thinking and prepare a budget can improve his management and make use of credit services.

Programs of agrarian reform, resettlement, agricultural modernization, irrigation schemes, farm credit - in short, any program aimed at agricultural - and in the end national socio-economic development - depends for its long-term success on an expanded and more efficient scheme of rural education that functions at the right levels. Extension education of farmers alone, and classical primary schooling of farmers' children have demonstrated their inadequacy by their failure. A well thought out, carefully structured system that provides the essential learnings for farm and rural people to live and work more effectively and which provides for training young agricultural and rural service teaching technicians in relatively large numbers is necessary to bring about rural transformation.

At this point we know more about what does not work than we do about what does. Sophisticated schemes prepared in government offices and headquarters of aid-giving agencies have provided some ingredients. Armies of scientists have developed centers of high-level teaching and research in most of the developing countries. New, more productive varieties of plants and improved farming techniques have been developed and demonstrated, but they have not resulted in the hope-for impact. High-level teaching and research programs are necessary, but they are not sufficient. There is a breakdown in communication between the research organizations and the rural population. Programs of agricultural extension are often staffed with personnel with too much and the wrong kind of education. They cannot communicate effectively with the rural population, nor do they aspire to. Most of them are urban-oriented and when assigned to the provinces, they scheme and maneuver for an assignment in the capital city.

What is needed is some creative work in local programs of education to develop a curriculum for rural children and adults that has real meaning for rural people in terms of how it effects their behavior in the everyday business of living. A part of this is to create a new "image" of education and agriculture. Rural people usually see education as a means of escape from farming and rural life, rather than as a means of making farming more productive and rural life more satisfying. Only by experience will we be able to determine what are the essential curriculum elements to achieve the desired ends. We know too little about what qualifications are required for effective rural teachers. We can be sure that if they are educated to the level of normally accepted standards, they will have acquired social mobility - to which they will quickly add geographic mobility - and move to the city. We know too little about effective functioning in a very small, one or two-room rural school. Typically, the authorities have simplified the problem by aggregating schools into six or eight-room units for ease of administration, and removed the school from within daily walking distance of the children and parents it is intended to serve. Worse yet is the tendency to boarding schools which isolate not only the teacher from the student's home, but the student as well. The example of an agricultural boarding school sitting in splendid isolation from

the neighboring farms across the fence is all too common.

The purpose of this article is not to propose specific answers to the general problem, but rather to call attention to some of the essential questions. The specific questions and the answers must be as variable as the multi-colored tapestry of the various cultures of the developing nations themselves. No bigger challenge faces the world today than the problem of education for rural transformation. The key lies with teacher educators who are willing to experiment with local programs of instruction as a basis for developing programs of teacher and rural technicians training that can make rural transformation possible.

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