

Technology Transfer Through Vita, Volunteers For International Technical Assistance

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VITA (Volunteers for International Technical Assistance) is a non-profit organization which supplies technical assistance to developing nations on a person-to-person basis. The program relies upon a large collection of volunteer technical experts whose advice has answered over 13,000 problems in the general field of developmental technology. Several manuals and handbooks have also been published. The majority of the volunteers are in the physical sciences but technology must be supported by socio-economic considerations, since technology appropriate to the needs of developing nations is only one factor in the drive to achieve freedom from want.

Two-thirds of the world is ill-fed, ill-housed, illiterate and over-populated. This dismal fact has become more and more evident in the last ten years. In 1959 a group of research scientists and engineers living in the Capital District of New York State (Albany, Schenectady and Troy) decided to try to do something about the problem in a personal way. They started Volunteers for International Technical Assistance, an acronym which read, not by coincidence, VITA—the Latin word for life.

Considering that immense hydroelectric projects and billion dollar surplus food programs were only part of the answer, they felt that if the individual farmer or craftsman in the developing country could be put in touch with an interested technical specialist, he could benefit directly and in a more lasting way than if he were passively receiving big government assistance.

These men mobilized an impressive array of technological talent and let it be known that they were available through correspondence as problem solvers, free of charge, to people in developing areas, people who could not possibly afford consultant fees even if they had known whom to consult. Problems began to trickle in, and answers

went out. Headquarters was someone's living room, and expenses, mostly postage, were paid by the volunteer who answered the problem.

As word of the program spread, VITA grew. In 1967 it was joined by DATA International, a very similar group which had started independently on the West Coast. The combined organizations answered 2,737 problems in 1967. This year there are over 5,000 volunteers from 64 countries served by a headquarters in Schenectady.

The Inquiry Service has handled more than 13,000 problems from the Peace Corps, personnel of the United Nations, the Organization for Economic Cooperation and Development, the Agency for International Development, CARE, Catholic Relief Services, Church World Service, the International Executive Service Corps, agencies of governments, missionary groups, educational and research institutions, and private citizens in the developing countries. A few sample inquiries:

A California architect is designing a tuberculosis sanatorium for a Presbyterian mission in the Middle East.

Two New York civil engineers designed a bridge to connect a relocated Chilean village with the timber supply which is its livelihood.

A Boston-area town planner and a New York furrier helped a new rabbit-raising cooperative in Guatemala learn how to prepare marketable pelts for the U.S. market.

The publications program has grown with VITA.¹ *The Village Technology Handbook*, which describes 110 devices to improve rural life, was prepared by volunteers and published in two volumes by the Agency for International Development in 1963 and 1964. The handbook has been translated into French, Spanish, Burmese and Hindi. *Rural Technology Manuals*, supplements to the Handbook, are produced as information collected by volunteers in answer to often-posed problems becomes available. (A new edition is now in preparation.) *The VITA Newsletter*, which has a circulation of 17,000 around the world, carries general news of VITA together with hard-to-answer problems and unusually interesting solutions.

A "Village Technology Center" has been established to design, construct, test, and demonstrate devices to facilitate the introduction of improved technology at the village and rural level. A *Tools for Development* catalog describes plans available for these devices. Agencies working in rural development are beginning to use the center as a supplement to their own training programs.

Where earlier artisans in our culture used simple materials such as wood and iron to make sophisticated machines, VITA is utilizing advanced technology and sophisticated materials to make simple machines. Plastic film is used to surface a Solar cooker, an oil can becomes a stove and an old bicycle powers a wood lathe. In the same way the skills of a human factors engineer, utilized to facilitate space travel, can be equally well applied to the design of a threshing machine or a simple pump.

VITA volunteers are now studying the most effective way of using human power for mechanical purposes. The power produced by rowing action has been compared to that of bicycle action. It appears that the bicycle and the treadmill make the most efficient use of the oxygen consumed, and this principle will be used in the design of a new pump.

¹ A bibliography of some VITA publications is included following the article.

VITA is assembling a representative collection of problems in development technology, numbering over 13,000 as of June 1968. A Thesaurus is being prepared for indexing and retrieval of the problems and as a potentially useful research tool, which will soon be available to students of development technology. This will be even more useful if a more effective follow-up of the results of our assistance can be obtained. Feedback from developing areas is spotty. It is not always possible to tell whether the answers were useful or not. Help from psychologists in the designing of our follow-up requests would be valuable.

Where the culture has reached a slightly more elaborate level, VITA is questioned about modest enterprises in craft work and industry. Market surveys for various familiar and exotic articles are often requested. A market survey sometimes shows that the proposed product cannot be made and sold profitably and that the best advice that VITA can give is: "Don't do it." In that case a market specialist will frequently suggest an alternative or an improvement which results in the establishment of a successful enterprise.

Although VITA was founded by workers in the physical sciences and has confined its attention primarily to the basic problems of food, shelter and sanitation, it is becoming evident to those who are working in the field, however, that technical expertise must be assisted by sociological competence. Applied technology needs more than merely mechanical skill, as Dr. Frankenstein discovered. It requires social responsibility as well. The technically advanced nations have an obligation, if only for their own long-range self-interest, to help raise the standard of living of the rest of the world. Technology and sociology are equally involved in this effort.

A number of VITA volunteers have expressed interest in studying the impact of new technology on developing cultures. Many of them feel it is necessary to know more about the human needs before the technical needs can be assessed. A great deal needs to be done to facilitate cross-cultural communication. Much also still remains to be discovered about methods of introducing new technology into different cultures. Anything which can be learned in this area will be of great assistance to VITA.

Further information, for those interested in

becoming Volunteers, may be obtained from VITA, Union College, Schenectady, New York, 12308.

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