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AGENCY FOR INTERNATIONAL DEVELOPMENT  
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MEMORANDUM

TO SER/IT, Mr. Arthur A. Kimball  
FROM OPA, Clinton F. Wheeler  
SUBJECT Clearance of Paper

The Office of Public Affairs has reviewed the attached paper by Dr. Philip Sperling entitled "The Multi-Perspective Assessment of Training," and has no objection to its publication.

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THE "MULTI-PERPECTIVE" ASSESSMENT OF TRAINING

By Philip Sperling\*

By the end of calendar year 1970, the 150,000th trainee had participated in the training program sponsored by the Agency for International Development or its predecessor agencies. By the end of 1971, the number had increased to over 162,000. Over the past several years, the number of AID-sponsored participants in training has remained about the same - slightly over 13,000 in each of the fiscal years 1969, 1970, and 1971. Only about three-quarters of these were trained in the U.S. The rest were sent to various "third countries" for training.

The Agency for International Development has several broad objectives in supporting a training program for the human resources of the less developed countries. Where technical assistance programs are being carried out, training programs can be the decisive upgrading of skills that is needed in the technical and productive capabilities of a country. Because the trainees are "participating" in the economic and social development of their country, they are called "participants." The word is commonly used and is probably a useful one, especially in those cases where mature and responsible government officials would prefer not to be thought of as students or trainees. The goals for their training are not only the acquisition of technical knowledge and skills, but the broadening of their outlook through exposure to modernization, to the methods of change, and to the democratic process. It is to be hoped that when these goals are

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(The opinions and views expressed in this article are those of the author and not necessarily those of the Agency for International Development.)

reached, the foreign national will have gained a better understanding of the United States and its way of life and particularly how Americans take part in the civic, social and economic activities in their communities.

While the number of participants in training remains about the same, the population of trainees is actually a dynamic one. About 5000 - 6000 A.I.D. participants arrive each year and approximately the same number depart each year. While here in the U.S., the length of their training period varies from a few weeks to four or more years. Usually, about one-third come from Latin American countries; the next largest number are from the Far Eastern countries; followed by those from Near East-South Asia countries; and from Africa. Most of the participants come to the U.S. for training in some aspect of education (29%); the next largest proportions are in agriculture (26%), public administration (11%), public health and family planning (11%), public safety (7%), industry (7%), labor (4%) and other programs (5%). More than half of all participants are in academic programs; about one-quarter are in specialized programs, and the rest are in either on-the-job training or taking short-term observation tours.

Figure I shows the number of participants brought to the U.S. or third countries for training over the past 28 years.

#### Dollar Costs

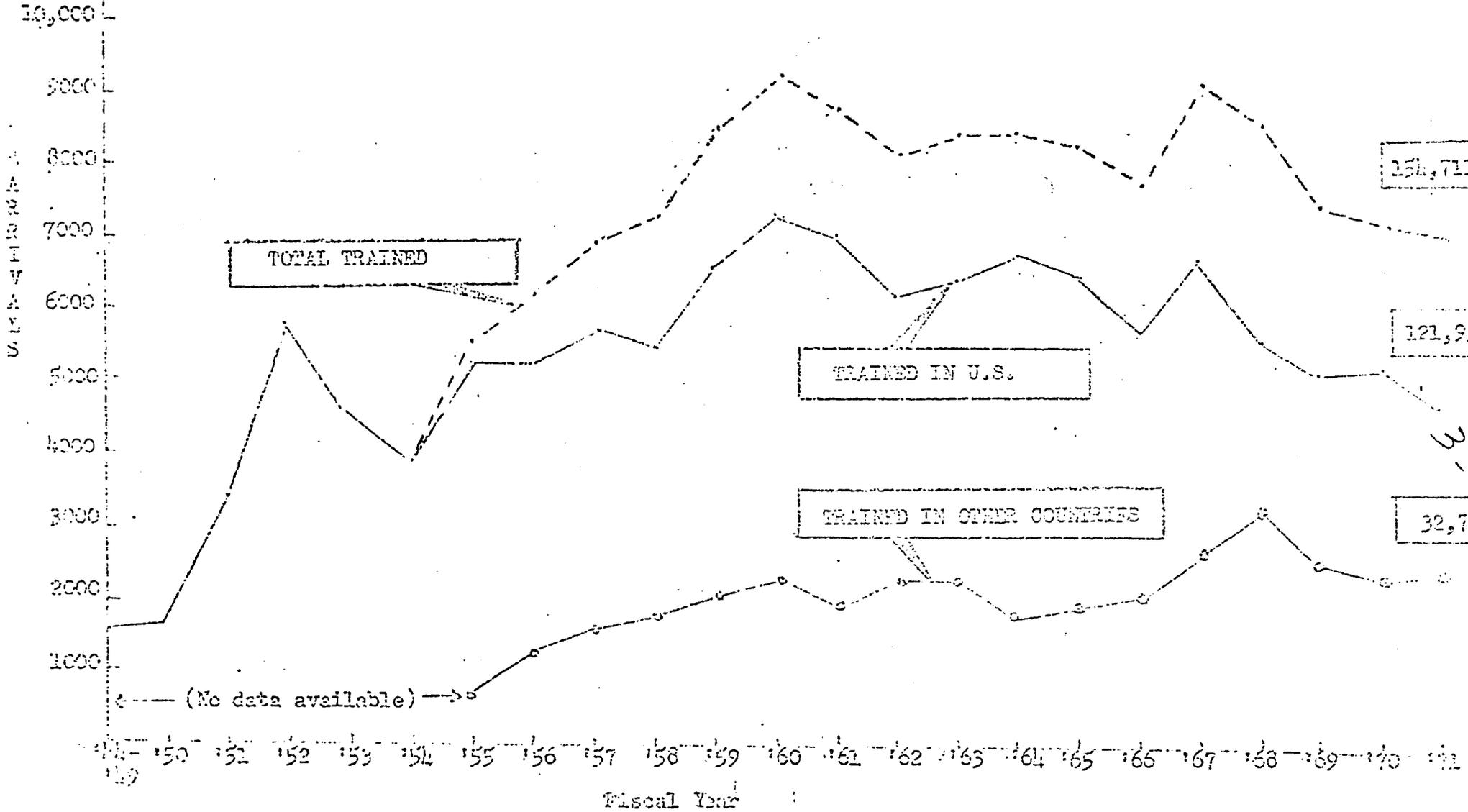
The costs of this training are probably best estimated as a percent of the AID monies going into technical assistance programs. Over the past several fiscal years this has been about 15% of Technical Cooperation/Development Grant funds. As a percentage of total AID funds, costs of

ARRIVALS OF AID-SPONSORED FOREIGN PARTICIPANTS

IN THE U.S. AND IN OTHER COUNTRIES

Figure I

FY 1944 Through 1971



participant training amount to less than 3% of all budgetary commitments. These total costs include everything: - travel, if this is not paid for by the participant's own government - tuition, book allowance, maintenance allowance, and so forth. Whether the U.S. pays for a particular kind of expense depends on the kind of agreement which has been negotiated with a participants' national government. As dollar costs for participant training, they are relatively small in comparison with costs of commodities or of technical advice -- two other components of AID's technical assistance projects. They have run between \$45 million and \$50 million per year.

### Quality Control

This paper is not about the AID participant training program as a whole. It is about the evaluation of that training. How is a program of this size and importance assessed and evaluated? For quality control purposes, an evaluation system for an international training program this large needs to take systematic samples of what is going on at critical points as the participant goes from one phase of his training to the next. This is necessary so that AID management can know what is happening during the training for which it is responsible. AID needs to know not only about the administrative aspects of training -- which the managers can sometimes control -- but about the substantive and personal-social aspects of training which they cannot always control.

### Phases of Training

There are three major phases to any training course -- before, during, and after training. The first and last phases take place in the participants' home country. There is a pre-departure preparation phase which occurs

before the participant leaves for the U.S. or a third-country. This phase can set the stage for a successful training tour, or it can start the participant off "on the wrong foot." There is a follow-up or utilization phase which occurs after the participant returns home. The middle phase - during training - has components of its own. There is a reception and orientation phase after arrival in the new country; a phase for the technical training per se, with a complementary or non-technical training aspect, and another preparatory phase prior to departure for home. Again, the second pre-departure preparation phase may set the stage for relevant utilization of the new skills, or for a failure to get a good return on the investment made in the training.

#### Assessment by Participants

To gather data assessing these stages of training from the participants, AID's Office of International Training uses an entry questionnaire to understand what happened in the pre-departure phase, a mid-tour questionnaire during training, and an exit-interview right after the training has been completed. The entry questionnaire is a brief three or four page affair which the participant completes within a few days after his arrival. It contains less than 40 questions, the responses to which may be summarized for all the participants from any one country to throw light on their preparation for their trip and for their training program. Sample questions are: "Before you left your home country, did you get some orientation about the A.I.D. training program" (yes or no)."; "What was included? (Check one:) Explanation of the A.I.D. program; AID policies and regulations for participants; Information about life in the U.S.;

Other things (write in)." "Did someone explain your training program before you left your country?" (Yes or No); What was included? (Check one or more): Specific objectives of my technical training program; Relationship of my training program to an AID project in my country; Place of training in the U.S.; Travel arrangements to the U.S.; Other things (write in). Similarly, the questions on the mid-tour questionnaire deal with items of interest that tell about problems or difficulties being encountered during training. By and large, this mid-tour questionnaire has not been very fruitful. It is sent out by mail and returns have been disappointing. Good or better results can be obtained with a personal letter from the training specialist to the participant.

For over six years, exit interviews were conducted under a contract with The American University, Washington, D.C. by the Development Education and Training Research Institute (DETRI). Information was collected from participants about their reactions to the administrative and non-technical aspects of training. Information about specific training program content was deliberately avoided because it was felt that only the experts could assess that. Between July 1967, when the program went into full-scale operation and March 1972, when DETRI stopped conducting interviews, some 10,000 individual participants and members of short-term observation teams from more than seventy countries had completed questionnaires and been interviewed. The responses to the questionnaire items alone contained almost 500 bits of information. The data collected were analyzed and presented through a series of reports on all participants; on participants from particular countries; on participants trained at particular institutions;

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or under special programs. A computerized data bank made the DETRI exit interview information readily accessible for rapid retrieval when AID needed it in a hurry. An example of the kind of information made available to AID by DETRI is shown in the accompanying Table I. Here the responses are displayed for over 5000 participants to the question: "Overall, how satisfied are you with the total technical training you received?" Tests for significant differences in these statistics could tell us whether changes were taking place over time as policies or procedures were changed. Factor analyses and the computation of regression equations could tell us what the contributing factors were for the various reactions participants were having to their training.

#### Problems With Sampling

One of the main problems with interpreting the exit interview data from a centralized facility like DETRI, was that we could never assure ourselves that those participants departing from Washington, D.C. and who were scheduled for DETRI exit-interviews made up a group or sample which was representative of all trainees departing from the U.S. To save on transportation costs, we missed interviewing many Latin Americans who departed for home via Southern ports and Asians who departed from West Coast ports. Thus, our sample of exit interviewees was never really representative - although DETRI made strenuous efforts to estimate the magnitude of the error. Attempts to select stratified and random samples are being tried again, using AID's own in-house staff to conduct a briefer version of the exit interview, and one which can be more readily "tailored" to the participant's training.

TABLE I

Question: How satisfied were the participants with their technical training programs?

SATISFACTION RATING	FY 1969		FY 1970		FY 1971		FY 1972		TOTAL	
	%	N	%	N	%	N	%	N	%	N
1 (Extremely satisfied)	24.0	233	26.0	443	27.0	459	27.4	305	26.2	1240
2	38.2	371	40.0	683	39.6	671	42.8	476	40.2	2011
3	23.4	227	21.3	364	20.9	354	19.1	212	21.1	1197
4	8.4	82	7.2	123	7.8	133	7.0	77	7.6	415
5	3.4	33	2.9	49	3.4	57	2.2	25	3.0	164
6	1.5	15	1.3	22	0.9	15	1.0	11	1.1	63
7 (Not at all satisfied)	1.0	10	1.3	22	0.4	7	0.5	6	0.8	45
TOTALS	100.0	971	100.0	1706	100.0	1695	100.0	1112	100.0	5465

PROBLEMS WITH PARTICIPANTS' ASSESSMENTS

It should be remembered that assessments by participants or any one else ultimately boil down to personal subjective judgments. There are all sorts of "instruments," devices, and statistical manipulations which are useful for minimizing the errors of judgment and for maximizing the reliability and validity of the information received. For some purposes, the participant himself may be the best judge. In AID, we do use the participants' own assessments of training where we want to know his personal reactions, his experiences, and his expectations for the future. Where there is utility in knowing whether he, personally, is satisfied with some aspect of his training, there is no better judge. He is probably as good a judge as anyone when it comes to whether what he is learning has relevance to his own needs or to his situation back home. Sometimes, however, there may be many things relevant and pertinent to his job about which he may be totally unaware. If he does not know about them, he cannot make judgments about them. Also, students usually do not have a very good basis on which to make comparative judgments about the quality of their training, about the pedagogy, or how current or obsolescent the information may be, which they are being taught. Because of these built-in biases in subjective assessments we usually have to use outside evaluators.

There are still other problems which present themselves. In the American culture, we frequently confront a respondent with questions and expect a direct answer. But people from different cultures do not always want to respond directly to direct questions. They may view it more as a frontal assault. They may feel it is more important to maintain a courteous mien than to answer at all. More commonly, they may give an answer which they

believe to be the one we want. To minimize this sort of thing, we can try to rely on trained interviewers who can skillfully avoid the overly direct approach, or we can rely less on participants' assessments, and depend more on someone other than the trainee per se to make the report. That way it is less likely to be colored by ingratiation factors. This approach is considered to be more "objective," although it should be remembered that even someone's "objective" assessment of someone else is at best another subjective judgment.

#### The Multi-Perspective Approach

Rather than bog down in a philosophical dialog, it seems best to use the term "multi-perspective." This means getting more than one perspective on the same thing. The more perspectives we have, the greater the likelihood of our understanding what the reality is. So in addition to a participant's assessment, we seek such things as grade-point averages from colleges and universities, reports from academic advisors and foreign student advisors, and all other reports from officials at training institutions who may - or may not - have a different perspective from the participant himself. Thus a multi-perspective array is built up about the training in all its aspects -- about its efficiency, its effectiveness, its appropriateness, and its relevance. Sometimes it is necessary to have still another outsider's perspective to look at the training institution itself, or at the training officials themselves for their efficiency and effectiveness!

#### Follow-up Evaluation

The ultimate evaluative test of training is whether the participant can utilize and apply his knowledge in the real-life-situation-on-the-job

after he has returned home. This makes the follow-up phase essentially the most important period in which evaluation of training might be made. At one point we tried to devise a "model" questionnaire which was to have been adapted by AID Missions to their local situation. It was designed to elicit information from the participant about the degree to which he was utilizing his training. To bolster this participant assessment with the multi-perspective approach, we had also devised "model" questionnaires to be completed by the participant's supervisor or others who knew him. These were to give specific information about the degree of utilization of the training, about the participant's performance on the job, and whether he was teaching others his skills. None of these worked. They had a format that was too complicated and people in the field usually could not find the time to have the forms filled out.

Another technique we have tried which has been relatively more successful is the collection of "success stories." These are anecdotal reports of what happened after participants returned home. They are especially useful when the returned participant has risen to fame or fortune or some position of great public responsibility.

For example:

A Pakistani botanist working on his doctoral degree at Texas Agricultural & Mechanical College developed a new grain sorghum. The grains were 25% to 50% larger than those on present-day commercial types of sorghums. In addition to promising greatly increased yields, these new plants were also fertile, a distinct advantage over many of the new but sterile hybrids now planted. This Pakistani's work has been termed a major breakthrough in grain sorghum's improvement by geneticists and plant breeders. He is continuing his work at a research center under the Ministry of Agriculture in his home country, where the great need for more food is a major problem.

Another participant, from Afghanistan, received a baccalaureate degree in horticulture in 1960 from Colorado State University and then returned to his home country to continue his work in agricultural development. In 1963 he became the President of Agriculture of the Nangarhar canal project, where he supervised 3000 employees developing the agricultural resources in that important region. He returned to the U.S. in 1966 and received a Master's degree in horticulture from the University of California. On his return to Afghanistan again he was appointed Director General of Research for the Ministry of Agriculture and Irrigation - a position he still holds.

Still another "success story" is that of Mrs. Ellen Johnson-Sirleaf who was an AID participant who completed her Master's degree in Public Administration at Harvard University in 1971. Before her training she had been a Special Assistant to the Secretary of the Treasury in Liberia. On her return, she became Assistant Minister for Fiscal Affairs in the Ministry of Finance. She has been instrumental in devising and executing Liberian economic development policies in both domestic and international matters. She recently developed and negotiated two AID loans for about seven million dollars for improvement of airports and rural roads, and was one of her country's representatives at the recent IMF/IBRD meetings in Washington.

#### What is the Criterion?

A considerable amount of research needs to be done before it becomes clear as to just how evaluation of training may be done in the follow-up phase. First, we need to sharpen and refine our definition of our ultimate criterion. Is it really utilization? Or is it the impact of training on development that we should be measuring? There are, as yet, no clear-cut methods whereby the contribution which training makes to a development project, might be measured. Most people seem quite certain that the effect of training is a positive one. We are certainly in agreement that training is a good thing. But we have to take this on faith. The method of actually demonstrating this has not yet been devised.

Prior studies in education and training have nearly always placed emphasis on pedagogical techniques, duration of the training, mix of students, effectiveness of teaching aids, and so forth. Too, in almost all of the studies on training, the focus has been on the bringing about of change within the individual - rather than on some change wrought by the trained individual on something else.

### Training Outcomes

The clue in follow-up evaluation, we believe, is to concentrate on the outcomes after training has been utilized; on the measured products produced by the trained person. The missing link, as it were, in trying to trace the influence of new skills on economic or social development, is in the measure of productivity of the trained person versus the untrained person. What is produced as a result of training? And what does that bring about next? Somewhere, in the chain of events that we call change, there is something that is attributable to training which is also influential in some development activity. That training outcome is what needs to be identified.

The kind of thing that we think we are looking for is illustrated by recent experiences of the author in Central and West African countries. A short six-week course in project management was given as a residential seminar in Yaounde, Cameroon during the summer of 1972 for about forty high ranking ministerial officials from five francophone countries in that region of Africa. One would not have expected much impact to be seen so early, but in a subsequent follow-up to that Yaounde seminar, a great many training outcomes were reported. These stemmed directly from the training and also probably had some impact on the development projects

under these former participants' control. Several reported they were using PERT and GANTT charts to schedule their priorities - techniques that had been taught in the project management course. One reported that on the basis of his analysis his Ministry discovered for the first time that the contractor was almost a year behind schedule. Two individuals confirmed that the notes and case study reports they had prepared on real projects in the course had been published and were being used in their Ministries. Several individuals reported they had bolstered the morale of their staffs when they used the "human relations techniques" they had learned in the training session. Most of them reported being able to make better analyses in depth of their project problems which facilitated their Minister's decision-making. The final tests of this sort of training outcome are whether the funds allotted for their projects are being utilized properly; whether they are procuring the appropriate commodities; whether their projects are making progress ..... These are the indicators of the impact training can have on development.

#### Systematic Assessment

Since the operation of training programs for large numbers of participants is, in effect, a "system," the means by which the evaluation of training can be done is by a subsystem. The following Table II shows such a multi-perspective assessment subsystem with the groups of instruments and devices used by A.I.D. in the three major phases of training: before training; during training; and after training. The table also shows which of the devices and "instruments" used are considered subjective assessments by the participants or the more objective assessments by others. "Achievement"

TABLE II - MULTI-PERSPECTIVE

ASSESSMENT OF TRAINING

	<u>Before Training</u>	<u>During Training</u>	<u>After Training</u>
Reports by Participant	Entry Questionnaire	Mid-Tour Questionnaire	Final Report
	Entry Interview		Exit Questionnaire
		Reply to Personal Letter	Exit Interview
<hr/>			
Reports by Others	Planned Training Program	Reports from Training Facility	Reports from Supervisors
	Selection Procedures	"Achievement" Tests	Training Outcomes
	Qualifying Tests		Project Appraisal Report
	Language Tests		

.....> T.....> I.....> M.....> E.....

tests refer to all those examinations or other methods of tapping the increase in technical knowledge. The "Final Report" by participants is a narrative paper written by the participant after completion of training to show how he is applying what he has learned now that he is back on the job. The Project Appraisal Report is an AID evaluation document used to assess the degree of success or failure of technical assistance projects in attaining the purposes and goals originally set for the project. It contains a portion which addresses itself to the contribution which the trained human resources have been making to the project objectives. The measure of "training outcomes" refers to the new idea for follow-up evaluation mentioned earlier. It has not yet been used except in an experimental way, but shows promise of developing into a quantitative measure of benefits accruing from costs of training.

#### Assessment as Part of the Operations

Such a training evaluation system needs to be "built-in," so that it does not interfere with nor impede the main system of operations, but still has "feed-back loops" to A.I.D. management at all critical phases during the training.

To build in an evaluation subsystem, and still avoid additional paperwork, which a subsystem usually generates, takes some ingenuity. The extra work will be vigorously protested by those involved in the operational aspects of a program, unless use is made of operational forms and other documents actually used to run the program itself. These forms need to be designed to obtain the evaluative information by installing the necessary questions that get the needed information. Thus, the assessment subsystem becomes

part and parcel of the main system and quality control can be maintained all along the line.

### Evaluation of A Quality Control System

What does quality control actually do? What have the end-results of such a training evaluation system been? It should be remembered that the concept of evaluation in AID is to review the past so that plans for the future will be improved. Specifically, when the Entry Questionnaire results have indicated that participants from a particular country have not been given the proper orientation, the AID Mission in that country has been notified and given guidance about steps that must be taken to correct the situation for future participants. When results from Mid-Tour Questionnaires or personal letters have indicated that problems or difficulties have been recurring at a particular training institution, a Foreign Student Advisor or other university official has been notified so that course loads could be changed, living accommodations made easier, or book allowances increased. The Exit Interview results sometimes uncover unexpected situations that have occurred during training programs. For example, the U.S. Civil Rights Act of 1964 deals with non-discrimination in federally assisted programs. While the Civil Rights Act does not contain specific provisions dealing with the placement of foreign students, it is public policy to comply with the spirit of the Act. Accordingly, when AID has learned through exit interviews or evaluation reports that Black Africans, for example, might have been discriminated against at some training location, it has taken action to avoid placing other foreign guests in such places. Evaluative results have also been used to assist us in making decisions about training facilities. In 1972, three training

institutions were under contract to the Office of International Training and each was teaching the same course to foreign participants. The same series of questionnaires, observation of facilities, and interviews with faculty was used at all three places. By pulling together the assessments of the participants, the faculty perceptions, and the check list results of our own observers, we were able to assemble a multi-perspective assessment of the degree to which training goals were being met at each of the three training institutions. When these indicators of goal attainment - benefits - were weighed against the costs of the training at each place, we were in a better position to make judgments about which training contracts should continue and which should be permitted to expire. One of the better examples of the use of the multi-perspective assessment procedure was a special evaluation carried out simultaneously at 30 different cities around the United States. During Christmas week, when many university campuses close and most American students return to their homes for the holidays, our foreign participants need a place to go and things to do. A.I.D., through the good auspices of Community Services organizations, all over the country, has organized Mid-Winter Community Seminars for many hundreds of foreign participants. This gives the participant an opportunity to see another part of the country, to experience hospitality in American homes, to see American "volunteerism" in action, and to watch American democracy at first hand. It is hoped that the experience will greatly broaden the participant's outlook beyond the particular technical field he has come to study. By designing matching questionnaires for both the participants and the sponsors of the seminars, we learned the perspectives of both the recipients and the donors on the

same elements in this informal sort of training being conducted in many different places at the same time. Feed-back information on what happened in all of the seminars was provided at a meeting of the sponsors. The following year's seminars were thus planned in such a way that the problems and difficulties that had been reported could be avoided, more of the preferences of the participants could be accommodated, and the effectiveness of the future seminars could be greatly improved.