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AN EVALUATION OF THE IDEAS, INC.
VIDEO-BASED NON-FORMAL EDUCATION PROGRAM

DUPLICATE

DR

Submitted by
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This is a report of my evaluation of the Operational Program Grant "Institution of a Specialized Methodology for Adult Non-Formal Education in Dominican Rural Communities," carried out by IDEAS, Inc., of Washington, D. C. The project was designed to develop videotape technology as a supplement to the communications programs that have been established within the Dominican Republic to bring technical resources to the country's rural poor.

I attempted to observe and document applications of videotape technology in educational outreach programs, especially the application of a technique the project directors have called the "modified Foxfire approach," as well as the impact of the program on those who have participated in it: the Dominican administrators and staff, and the rural people who are the program's primary audience.

The information in this report is based on interviews with 32 people (listed in Appendix A), including administrative and field staff, and farmers from local communities served by the program. I visited field locations in Higüey, San Cristobal, and Santiago, and I talked in Santo Domingo with a participating teacher from the Vocational Education Center in San Juan de la Maguana. I was unable to talk to participants in Barahona, San Francisco de Macoris, and Moca.

IMPLEMENTATION OF THE PROGRAM

The program is implemented within two agricultural extension and education programs of the Dominican government, CНИЕCA and ISA.

CНИЕCA stands for Centro Nacional de Investigacion, Extension, y Capacitacion Agropecuarias (National Center for Agricultural Research, Extension, and Training). The name states the three main areas of CНИЕCA's activities: agricultural research, agricultural extension services, and the training of farmers, ranchers, and technicians.

Agricultural research is carried out in six major experimental stations: one in San Cristobal, three in Santiago, one in Juma, and one in Matalarga.

Extension work is the responsibility of almost 500 agricultural extension agents distributed throughout the seven agricultural zones within the Republic. Their responsibility is to serve as the communication link between the experimental stations and the farmers and ranchers in the field.

Training at CНИЕCA is divided into two programs, the vocational education program for farmers and ranchers (sponsored by AID loan 027) and a technical education program for continued training of extension agents.

ISA is the Instituto Superior de Agricultura. It is primarily an educational institution, with training programs for young students who will enter agricultural development fields, as well as extension and education programs for farmers and ranchers.

Video activities have also been carried out at INTABACO and CENDA (Tobacco Institute, and Center for Agricultural Development, both at Santiago), although neither organization is an official program participant.

THE EVALUATION QUESTIONS

The following questions guided the evaluation and provide the organization for the remainder of this report:

1. Have thirty-five young professionals and advanced students been trained and qualified in the use of VTR (video-tape recording technology) and in the preparation of audio-visual and other educational materials? (Discussed on page 4 .) Note: the specific numbers in this and others of the questions are taken from the project goals as described in the OPC proposal.
2. Have six local rural poor communities been directly serviced with finished audio-visual educational materials developed on the basis of research and investigation in those communities? (Discussed on page 6 .)
3. Have approximately 1,200 rural people been reached with the materials produced during the training and development phase of this program? (Discussed on page 10 .)
4. Have ten to twelve communities been selected for new documentary activity and the production of new video materials? (Page 13 .)
5. Have twenty to thirty communities been selected for presentation of the already produced audio-visual materials? (Page 13 .)
6. Has use of program materials, people, and methods been established within the existing technical service organizations? (Page 14 .)
7. Has technical follow-up been incorporated into the instructional method? (Page 19 .)

8. Do community leaders and residents seek the services of the technical Institutes as they pertain to this program? (Page 19 .)
9. Have conditions been established for a complete administrative take-over by the Dominican institutions? (Page 20 .)
10. Has a replicable program been developed producing video-based instructional materials? (Page 21 .)
11. Are the materials produced through this process appropriate and of sufficient quality? (Page 21 .)
12. Is the medium appropriate? (Page 23 .)
13. Are the materials accepted by the local people? (Page 25 .)
14. Have the local people applied the information learned through the program? (Page 25 .)
15. Has an effective training program been established directed toward the service tasks envisioned in the proposal? (Page 27 .)

This report concludes with a brief discussion of four problem areas not covered in the questions listed above, followed by some recommendations based on my observations.

1. Have thirty-five young professionals and advanced students been trained and qualified in the use of VTR and in the preparation of audio-visual and other educational materials?

Twenty-five people were trained in two initial five-month training programs. In addition, a small-scale training program was held at ISA in January. (As will be explained in more detail later, both of the original trainees from

ISA left the program to accept other positions, and the January Workshop was an attempt to re-establish the program there.) Other workshop-type training programs were held for some of the staff of the Secretary of Sports, and at CNIECA for Amilcar Romero, Director of CNIECA, Horacio Ornes from the Department of Agriculture, and five others, including an AID staff member and his wife.

Although the original proposal stated that thirty-five people would complete the intensive training program, no comparison of "numbers-trained" can be meaningful because of events in the program that changed both the training requirements and the nature of the training program itself. As described in the original proposal, the trainees were to have been university students who would receive their training as part of their regular academic work. However, early in the program, the cooperating university, Universidad Nacional Pedro Henriquez Urena, withdrew and was replaced by CNIECA. With the university cooperating, training would have been conducted at two locations: Santo Domingo (site of the university) and Santiago, where ISA is located. In contrast, when the university's participation was cancelled and CNIECA (a nationwide organization) joined the program, the number of regions involved went from two to seven (San Cristobal, Higüey, San Juan de la Maguana, Barahona, Santiago, Moca, and San Francisco de Macoris). At least two trainees participated from each of the seven sites.

During the last four months of training, the trainees returned to their home locations -- the seven regions mentioned above -- for an intensive field experience. At this time, there were only two portapak videotaping units that had to be shuttled back and forth between the seven field locations.

CNIECA later purchased an additional five portapak units and the management and coordination load was lightened considerably. Thus, while the proposal called for thirty-five trainees in two regions, I would judge that, with the addition of the extra portapak units, the twenty-five students widely distributed represent a more effective force than a greater number of trainees in two locations only, with five fewer portapak units.

2. Have six local rural poor communities been directly serviced with finished audio-visual educational materials developed on the basis of research and investigations in those communities?

As is the case with many of the questions, the wording of this question has been taken directly from the statement of goals within the OPG proposal. The phrase, "developed on the basis of research and investigation in those communities" refers to the "modified Foxfire technique" that was mentioned earlier. The idea of the modified Foxfire technique is this: In cooperation with an educational institution of some sort (Universidad Nacional Pedro Henriquez Urena and ISA in the proposal), students are used as non-paid adjuncts to agricultural and health extension programs, with their homework serving both as training in communication skills and as useful communication in outreach programs. Following training in videotape technology, the students' "homework" consists of the following: (1) documentation on videotape of a problem within a local community and the people's response to it; (2) videotape demonstration of the problem to a technical expert who can help to resolve it; (3) preparation with the expert of a videotape that describes a solution to the problem; and (4) presentation of the videotape in the community, with a follow-up by the technical expert to help the local people put into practice what they learned.

The benefits to the student are these: (1) development of technical communication skills (operation of video equipment, etc.); (2) development of esthetic and interpersonal communication skills on two levels: to technical experts and to community residents; and (3) personal development and enhancement of their own professional advancement.

The benefits to the outreach organization and to the community are these: (1) awareness of community needs; (2) documentation for community residents of technical advice regarding their problems; (3) development of a national technical resource through the continual progression of students through the program; and (4) the occasional documentation of a useful native technology.

Although videotape presentations were prepared and presented in many communities, I could document only one case in which the materials were "developed on the basis of research and investigations in those communities" as described in the modified Foxfire approach. As part of their training, two video trainees located a town four kilometers away from CNIECA headquarters that was suffering a worm plague that was destroying the residents' corn and yucca. The two technicians went to the town (called Madre Vieja) with their portapak and recorded the worms, the damage they had done, and the local farmers as they described the problem and their efforts to combat it. The farmers reported that they had never received a visit from the local extension agent and that, as far as they knew, he was not aware of the problem.

The two video technicians edited the tape they made in Madre Vieja and played it for the agricultural technicians at CNIECA, who promptly sent them back to Madre Vieja accompanied by the delinquent extension agent. There, with the farmers looking on, the agent saw the tape that described not only

the problem, but also the farmers' concerns that, so far, he had done nothing about it.

Although the agent had not been prompt in learning of their need, he was prepared to help them, and he told them that the insecticide they were using worked only with mani, not with corn and yucca; he told them what they should use, how to get it, how to apply it, and made arrangements for them to get it through his office, with financing.

The two video technicians taped his visit, and later, an edited version was played for farmers who had not attended the first meeting. The agent reported about a month later that the farmers were coming to him to get insecticide, and that the plague had been reduced by at least 50% in the days since the presentation. (Reported by Fernando Mejia, one of the participating trainees and currently Assistant to the Head of Technical Dissemination, CНИЕCA. Several others corroborated the key points of the story.)

Although the modified Foxfire approach was seen by the IDEAS staff and AID personnel as the major innovation of the program as proposed, its use did not continue beyond this once instance early in the program, despite the fact that the single instance seemed to be highly successful. I judge from my observations that the reason for the non-continuation of that key aspect of the program is the withdrawal from the program of the Universidad Nacional Pedro Henriquez Urena and the breakdown of the program at ISA caused by the departure of the two original trainees.

The loss of these two institutions was important for the following reason. The key to the modified Foxfire approach is the use of students as a free resource. The university and ISA are the only two organizations that have been involved in

the program where students could have taken part as described in the original proposal. The overwhelming majority of program activities have taken place within CNIECA, where the video trainees are not students, but rather paid teachers and administrators. As such, they have been subject, not to the intentions of the program's designers, but rather to the day-to-day demands of the organizations within which they work.

Most of the video activity at CNIECA takes place within the Vocational Education Program, a program which began just a few months ago with an extensive survey that provided large quantities of data on community needs to which the program will continue to respond for some time to come. In addition, there is a continual cycle of local farmers and ranchers through the Vocational Education Centers who are able to provide still more information about the help they need. Thus further documentation of community needs through the modified Foxfire approach is logically not a high CNIECA priority. On the other hand, all of CNIECA's video technicians have as part of their job description the responsibility to produce videotapes to meet the needs identified by the original survey, by the farmers who pass through the Vocational Education Centers, and by the CNIECA agents in the field. As I will point out in a moment, the video technology has been heavily and successfully used in that context.

I am not in a position to judge how AID Administrators should consider the failure of the modified Foxfire approach to become established as a continuing program. The situation is a lot like that faced by a coach whose quarterback has just run the wrong play for a touchdown. Those who are not the coach can do little more than be grateful they are not the coach. My personal opinion is that the modified Foxfire approach is a good idea that could be highly successful

in the right context. As things developed, the context within which this program was finally established was not appropriate for the modified Foxfire approach. I'm disappointed that it didn't work out. However, I ask myself this question: "If, by some magical powers of hindsight, all of the money that was spent on the project were restored to AID and conditions were returned to the way they were before the project, would AID and the Dominicans be better off?", and I find myself inclined to answer, "No."

3. Have approximately 1,200 rural people been reached with the materials during the training and development phase of this program?

I interviewed video technicians and administrators from five locations. Data from those locations on the number of communities and residents reached with program-produced videotapes are as follows:

	<u>Communities</u>	<u>People</u>
San Juan de la Maguana (Reported by Noel Contreras)	21	1,775
Higüey (Reported by Elpidio Gonzalez)	5	415
Santiago (Reported by Juan Sanchez)	12	900
San Christobal (Reported by Fremio Mejia)	30	2,090
INTABACO (Reported by Jose Reyes)	<u>111</u>	<u>26,217</u>
	179	31,397

Communities have also been served in the three locations for which I have no data.

Several comments are in order regarding these data. First, the overwhelming majority of presentations were reported by Jose Reyes of INTABACO (Tobacco Institute). Jose was one of the original trainees at ISA, in Santiago, and, shortly before the completion of training, he was hired by the Department

of Agriculture as the Head of Communications and Public Relations, North Zone, stationed at INTABACO. Not long after Jose left, the other ISA trainee, Carlos Labour, went to the United States on an AID-sponsored scholarship. With both trainees gone, no one was left at ISA to carry on the program. The Santiago Vocational Education Center trainees also used the Santiago equipment; however, they found themselves unable to do all that was required of them, and they wrote to John Westbrook, IDEAS' Caribbean Representative, telling him that they were forced by circumstances to withdraw from the video project.

Since there were no more video trainees at ISA, and since the Vocational Education Center trainees had withdrawn from the program, Amilcar Romero agreed to place the Santiago equipment at INTABACO with Jose Reyes, who had shown a great deal of enthusiasm for the work. It was then that Reyes was able to spend almost full-time, with good transportation, making community presentations, and he reached over 26,000 people in six months.

A note on the reliability of the figures I cited above: Fremio Mejia compiled a list of all presentations made in the San Cristobal area, but he included as well presentations of San Cristobal videotapes in other locations. I therefore had to try to separate the numbers representing presentations in the San Cristobal area from presentations of San Cristobal-produced videotapes in other areas. I believe I am reasonably close to the actual figures. Copies of Fremio's report are in a more comprehensive report that is on file with David Cohen, AID/DR, and with Bill Luken, AID/Washington.

I interviewed Noel Contreras (San Juan de la Maguana) away from his office, so he did not have access to his files. However, he states that he has maintained accurate data which are available for inspection. The teachers at

Higüey and Santiago chose to answer from memory, and because of time limits I did not push them to find out if they could back up the figures from accurate reports. Because they were reporting first-hand experience, they are likely to be right about the number of community presentations, but off some in the number of people who attended. Jose Reyes has kept a detailed record of his 111 presentations. A copy of his report is on file with David Cohen and Bill Luken.

4. Are no less than three other local host institutions coordinating with the original groups and cooperating in the continuation of the program, using the staff and materials produced?

I was able to document use of program staff and materials by CENDA, INTABACO (as I have described above), the Department of Sports, and national officers of the Department of Agriculture, including the Secretary.

CENDA was one of the organizations originally scheduled to participate. A change in their organization required their withdrawal from the program at the time CNIECA became involved. CENDA later became unofficially involved in a way I will describe in a moment. Rafael Diaz, Head of Technical Dissemination for CENDA, indicated to me their intention to become quite heavily involved in the use of program materials, as well as production of their own materials, using program staff.

I mentioned earlier that a short training program was conducted for staff of the Department of Sports. As far as I was able to determine, there has been no involvement beyond that initial experience.

I will describe some of the video activities of the Secretary of Agriculture in a later section.

5. Have ten to twelve communities been selected for new documentary activity and the production of new materials?

This question refers to the modified-Foxfire approach in which students document a community problem and then work with experts in preparing a video message for community residents that presents a potential solution to the problem. As I have explained, there has been only one application of the modified-Foxfire approach, and no additional communities have been selected for the preparation of Foxfire-type presentations.

As I have explained, the modified-Foxfire approach depends on the availability of students as a paid resource. The Universidad Nacional Pedro Henriquez Urena dropped from the program, and both ISA trainees left for other activities. As a consequence of these two events, there has been no formal education setting involved in the program where students might take part as part of their regular academic activity. Juan Castellanos has recently been hired at ISA to resurrect the video program, and he may be able to initiate the modified-Foxfire community documentation approach with his students there.

6. Have twenty to thirty communities been selected for presentation of the already produced audio-visual materials?

The videotape presentations are used most extensively within the Vocational Education Program. As that program began last Spring, five communities surrounding each of the Vocational Education centers were selected to take part in the first run of the program. Four hundred residents from among the five communities were to be trained (in groups of 25) through a cycle of three six-day courses, interspersed with field days in which the teachers from

the Centers go directly to the community to observe and demonstrate applications of the information learned. The cycle for a given class is as follows: Month 1, six day training program at the Center; Months 2, 3, and 4, field day in the community; month 5, training program at the Center; months 6, 7, and 8, field day in the community; and month 9, six-day training program at the Center. Thus, each cycle consists of three six-day classes and six one-day field days in each community over a period of nine months. In this context, the selection of new communities for presentation is a matter of greater weight than it was in the original context in which each community might receive a single field day on a travelling road-show basis.

As I describe in the next section, there have been many other video activities as well, most of which were not conceived of in the original proposal. The level of activity in these several applications is high enough that I am confident that at least thirty new communities will become involved during the coming year, particularly if Jose Reyes is able to continue his high level of activity.

7. Has use of the program materials, people, and methods been established within the existing technical service organizations?

As I have already explained, the proposed major thrust of the program, the modified-Foxfire approach, has not been implemented beyond a single experience early in the project. However, the video techniques have been heavily used for the following purposes: (a) Vocational Education Center programs, (b) farmer education, (c) education of technicians, (d) support to extension services, (e) recording one-time education experiences, (f) recruitment, and (g) documentation for official and public awareness.

(a) Vocational Education Center programs. I have described the

general operation of the Vocational Education Centers. In that context, the teachers appear to be very aware of the materials available on videotape and claim to use them whenever appropriate, both for classes at the Centers and for community field days. There are a few general interest videotapes available which are played for the farmers as evening entertainment during their six-day stays at the Centers. The trainees (now teachers) at each Center have prepared, and have official plans to prepare, videotapes directed toward the needs of their students as they perceived them. I was able to document 21 videotapes that have been prepared beyond those developed during the training phase.

(b) Farmer Education. Rafael Diaz, Assistant to the Head of Technical Dissemination, CENDA, reported the following uses of videotape in farmer education:

An educational program on corn raising will be held in early October. A total of 500 farmers will participate, two groups of 15 farmers on each of ten days. The technicians will teach new concepts and each farmer will be given a row of ground to practice on. The practice experience will be videotaped and played back to the farmers for self- and group evaluation.

A tobacco symposium is in the last days of planning at CENDA. The symposium will be held inside where only a limited number may attend. The proceedings will be broadcast outside through closed circuit TV so that farmers who cannot get inside may nonetheless observe the proceedings.

(c) Education of technicians. A field day was held in Puerto Plata to teach the correct use of fertilizers. CНИЕCA technicians taped the event and the edited tape is now used to train other extension agents in the planning and management of field days. (Reported by Amilcar Romero, Acting Sub-

Secretary of Agriculture, and Director of CNIECA.)

The Department of Agriculture held a field day in Yuma to teach new methods of potato growing. Ingeniero Cesar Franjul, National Extension Supervisor, asked the CNIECA video technicians to make a video tape to be shown prior to the field day that would (1) give the visiting technicians a panoramic view of what they would be seeing and doing at the field day, and (2) teach them the things that could not be covered at the field day due to the limited time. The film was prepared and shown in mid-April. (Reported by Fremio Mejia, video technician involved, CNIECA.)

(d) Support to extension services. CNIECA extension agents are encouraged to use the videotapes that have been produced through the IDEAS program. CNIECA responds to their requests with Mobile Units -- vans equipped with facilities for hooking up the Portapak units located in the field. When I was visiting CNIECA headquarters, the control board showed that four mobile units were in the field in response to such requests, with the fifth undergoing repairs.

Four films produced by the IDEAS program form the basis of a video library for extension agents: Gardening, Raising Beef Cattle, Dairy Production, and Rice Production. Two others are in planning: Banana Raising, and Raising Vegetables. A second series is planned that will cover problem areas rather than general production techniques. The first will document a worm that enters the hollow stem of the onion and thereby destroys the plant. The second will show methods of thinning banana plants.

(e) Recording one-time educational experiences. From time-to-time, people who are acknowledged experts make one-time-only presentations

within programs of the Department of Agriculture. There are other cases where programs within the Department cannot reach everyone because of limitations on people and transportation. On such occasions, video has been used for repeated presentations. Such cases include Professor Warner Koch, a German expert on weed control, who spoke to a limited group with simultaneous translation, and a woman from the department of agriculture who gave a class for housewives in Higüey. In each case, videotapes of their presentations have been shown to a greatly increased audience.

Some aspects of training in the Vocational Education Centers are costly in that they require field demonstration. In such cases (for example, in demonstrating the use of small tractors), the field demonstration in the first class is videotaped, and subsequent classes are able to observe the demonstration without having to go to the field. (These events reported by Amilcar Romero, Elpidio Gonzalez, and Fremio Mejia.)

(f) Recruitment. One of the major objectives of agricultural workers, particularly in the Vocational Education Program, is to encourage farmers to participate in the programs they offer. Video has been used in several ways as a recruiting tool.

For example, a few hours before field days, the technicians videotape scenes and people from the community. People are encouraged to come to see themselves and their friends on television, and while they are there they take part in the agricultural presentations.

Classes and field days are often videotaped and shown to potential participants to introduce them to the Vocational Education Program.

Many of the people I talked to acknowledged that the mere presence of

television is in itself an inducement to participate. Most program administrators stated that television drew people they would not otherwise reach. Two of the farmers commented on the fact that "everyone goes" to see the television shows, one of them emphasizing especially its attractiveness to the young people, who otherwise do not show much interest in interacting with the agricultural extension workers. Whether such interest in television will remain after its novelty has worn off can only be learned with time.

(g) Documentation for official and public awareness. Program participants reported several cases in which they were asked by representatives of agricultural and other programs to produce video productions that could be used to present their achievements to a variety of official and public audiences.

The Secretary of Agriculture is required to make a presentation each year before the President and the National Development Commission documenting the accomplishments of the Department of Agriculture throughout the Republic. This year, the Secretary requested that the CNIECA video technicians make a videotape for presentation to President Balaguer and the Commission. The tape was completed and presented during the last part of July.

The Secretary also gave a talk before the Chamber of Commerce that documented agricultural accomplishments throughout the country. The talk was videotaped, and an edited version of the two presentations -- the one before the President and the one to the Chamber of Commerce -- is being prepared for presentation to extension and other agricultural workers throughout the country.

The Secretary will make another presentation to the President describing the Vocational Education (Loan 027) program. CNIECA technicians have made a tape in cooperation with Horacio Ornes that is now in the last stages of editing and will be ready for the mid-September presentation. (Reported by Amilcar

Romero, Acting Sub-secretary of Agriculture, and Director of CNIECA.)

CENDA held its second annual CENDA Expone on July 17th and 18th. CENDA Expone is a presentation before Santiago community leaders of CENDA's accomplishments. A videotape, prepared in cooperation with CNIECA's video technicians, was the final event on the program. (Reported by Rafael Diaz, Assistant to the Head of Technical Dissemination, CENDA.)

8. Has technical follow-up been incorporated into the instructional method?

Follow-up refers to visits by extension agents to help the farmers apply what they learned in the videotapes. The Vocational Education Program is based on extensive follow-up, with successive field-days and classes over a period of nine months. Here the video-tapes are but a small part of the instructional program and they appear to be well-integrated with the many other activities.

The mobile units and the 111 community presentations by Jose Reyes represent another philosophy in which an occasional presentation is brought in to supplement the ongoing efforts of extension agents. I was unable to observe the extent of follow-up in such situations, although I suspect it depends primarily on the initiative and dedication of each extension agent. It is my impression that follow-up in such situations is not systematically organized, and as such could be an item of continued concern for the program administrators.

9. Do community leaders and residents seek the services of the technical institutes as they pertain to this program?

If the question is limited to the modified-Foxfire approach described in the proposal, the answer is "No." However, I was able to document occasions in which community leaders sought help from video technicians regarding some of their own instructional and public relations needs.

CNIECA technicians prepared a tape in cooperation with Padre Roman Espada that presented potato growing methods to residents of San Jose de Ocoa in connection with that community's annual Feria de la Papa. Although the region is known for its potatoes, many people in the community had never learned how potatoes are grown because the potato areas are off in the hills where few of them ever go. The tape was designed to increase community awareness of, and pride in, their local potato industry.

Bani recently held its annual Feria del Nino, and its organizers asked the CNIECA video technicians to help set up a television system that would show videotapes for entertainment, and, when live presentations were in progress, would let people outside the presentation arenas see, via closed circuit television, the shows that were going on inside.

The organizers of Sabaneta de las Palomas' celebration of Semana de la Cultura learned of the video program through a student at ISA. They then asked the video technicians to present two videotapes as part of the week's activities.

10. Have conditions been established for a complete administrative take-over by the Dominican In institutions?

Initiative in the direction of the program appears to have been assumed already by the Dominican organizations. The IDEAS staff continues to be involved in equipment maintenance, developing and teaching new techniques

to help the video technicians get more out of their equipment, helping with organizational problems, and filling in for the lack of transportation in the Dominican organizations. However, I judge the initiative in the application of video technology to be with the Dominicans on the basis of the following observations:

With the exception of the things done as part of training, all of the activities I have described to this point were of Dominican origin.

Within each of the participating organizations, I observed written plans for the production of new video materials.

Manuel Vargas Payano, Head of Technical Dissemination, CНИЕCA, made this observation: "In the beginning we had a problem: the people were not used to thinking about video as a tool. But during the last three months it has become part of their daily life, just like a pencil and paper."

The production of additional video materials is second in a list of 13 job goals established for Jose Reyes (INTABACO) for the year starting September 1, 1976.

Approximately 20 to 24 newspaper articles have been published about the video program at the initiative of the Dominican participants.

11. Has a replicable program been developed for producing video materials?

I was able to document 21 new video productions developed since the completion of training, and others underway. None of the program sites is inactive in the production of new videotapes.

12. Are the materials produced through this process appropriate and of sufficient quality?

I saw seven of the videotapes produced by program-trained technicians. In general, I believe the quality to be sufficient for the program's purposes.

I observed some problems: Wobble in the picture caused by low battery power, failure to use a tripod when required, too-fast pans, abrupt cuts in both audio and video, and poorly balanced audio overlays. However, I saw four of the earlier productions and three of the latest, and the quality of the latest tapes was obviously improved; most of the problems had been eliminated.

I saw some of production techniques that I was surprised could be accomplished with the equipment available. John Westbrook, the IDEAS Caribbean representative, explained that he had developed several techniques for imitating expensive processes with inexpensive equipment, including the following:

1. A means of adding music or narration over the original sound track, without the \$200 sound mixer usually required.
2. A means of adding titles over the original video image, a process which normally requires a \$10,000 machine.
3. A means of editing that does not require a stop-watch, is less tedious than the traditional method, and nearly as accurate.
4. A means of producing a lap fade (when one image fades as the other comes into view) without the \$13,000 piece of equipment usually required.

In all of these cases, the outcome was of slightly lower quality than that obtained with specialized equipment, but adequate for the purpose.

13. Is the medium appropriate?

Concerns regarding the appropriateness of the video medium in programs such as this usually focus on two issues: (a) the reliability of the equipment under somewhat adverse conditions, and (b) whether the same things might not be accomplished without the high investment required by video technology.

Rafael Taveras, the program electronics technician, is responsible for the maintenance of seven portapak units and 2 editing facilities. During the first four to five months of the program, when the technicians were learning to use the equipment, they experienced about 20 breakdowns, six that could be expected from the operation of new equipment in a sub-tropical climate, and another fourteen or so that were caused by an operational error on the part of the trainees: they were not allowing the machine to stabilize after using fast-forward and reverse. The problem has not recurred since it was discovered. Currently, equipment failures occur at a rate of about one every three months, although more time must pass before a true rate can be observed. Mr. Taveras carries out preventive maintenance inspections of the equipment every two months.

In the event of equipment failure, the technicians have been trained to do the following: (1) clean the video heads; (2) check all cable connections and switches; (3) clean and adjust the slip-rings that make contact with the rotating video head capstan; and (4) attempt no further maintenance and deliver the machine to Rafael Taveras.

Taveras maintains a stock of parts, including video heads. With his stock on hand and his available test equipment, he can fix any equipment failure that might occur with the exception of certain failures within the integrated circuits. If such failures occur, as they did on one occasion, he can repair them

if he is able to borrow the proper test equipment. Mr. Taveras has been trained and authorized by the Sony Corporation for the maintenance of equipment such as that used on the program.

An environment such as the one here creates the need for more maintenance than would be required in a climate such as that experienced in most parts of the United States, and some of the problems that have occurred are not anticipated in the Sony manuals. These have required diagnosis and the development of prevention and repair techniques by Mr. Taveras. I read two memos that he sent to the video technicians to teach them preventive maintenance techniques that were discovered through the project experience.

I believe the equipment has demonstrated outstanding reliability given the conditions of its use. Much credit must be given to Mr. Taveras, and it is not certain whether the same level of reliability could be maintained on subsequent programs unless they have the benefit of the services of a person as skilled as he.

It is difficult to determine whether the instruction being done with video might not be done more cheaply in some other way. The key feature of video in this context appears to be, not its instructional capability, but rather its attractiveness. On several occasions, program administrators pointed out to me that printed materials had been prepared on a number of occasions, but the extension agents and farmers simply did not choose to use them. Thus a simple experiment comparing videotaped instruction with instruction using some other medium may be misleading if it ignores the possibility that, outside of the experimental setting, other materials may lose their apparent effectiveness simply because people leave them on the shelf. For this reason, any complete assessment of the appropriateness of video must

include a continued observation to determine if video's attractiveness wears off over time.

On the basis of my observations of the equipment's reliability and the many ways video has been enthusiastically applied within the Dominican organizations, I would judge that video is an appropriate medium of instruction in this context.

14. Are the materials accepted by the local people?

I spoke with 15 farmers who had witnessed a community presentation, five from San Rafael de Yuma and ten from communities near Santiago. The Yuma farmers saw a tape on potato growing, and the Santiago farmers saw one on pig castration.

These farmers are but 15 of over 31,000 who have witnessed such presentations, and it is not possible to make general conclusions on the basis of such a small sample. It is also hard to inquire about attitudes in any direct way without biasing their responses. Nevertheless, I can report that what I observed in the spontaneous actions and comments of these farmers supports the conclusion that the Dominicans accept the materials with little reservation.

Jose Ramon Rodriguez' response was typical. During the visit, he said regarding the video program: "It's very valuable to us. I'd like to see more." As we left his home, he turned to Elpidio Gonzalez, a video technician who accompanied me, and said: "Will you bring us another film soon?" (The videotapes are called "films" -- peliculas -- even by most of the video technicians.)

15. Have the local people applied the information learned through the program?

The reservation expressed above regarding conclusions based on a miniscule sample applies to this question as well. Nevertheless, I can report that all but

one of the 15 farmers reported that they had applied, or would apply in season, what they learned from the video presentations. That single farmer who did not apply what he learned saw a potato film, although he had never grown potatoes.

I was sensitive to possible bias on this question also, and so I tried to be specific and direct in the following manner. First I asked: "What did you learn from the tape that you did not know before?" Here I expected them to list specific points. Then I asked, "Have you done any of these things in your work?" or, if the season was not yet appropriate: "Do you intend to apply these things?" And finally: "Do you think that your doing these things means you will have a better yield?"

Jose Ramon Rodriguez said the following: "I learned that last year (his first planting potatoes) I used seed potatoes that were too big." A moment later, he interrupted whoever was talking at the time to say: "I remember something else. If you cut the flower, it gives more." When I asked if what he learned meant he would get more potatoes next time, he said: "Of course," and he launched into an explanation of why he could get more potatoes with smaller seeds.

Another Yuma farmer reported that he had learned the following things: the form of the row, the short time in which the plant produces, the way you have to be careful in the cycles of fumigation, and the fact that potatoes grown in Yuma do not produce at the same time as those grown in Constanza (a large potato growing region).

The Santiago farmers saw the pig castration tape in a Vocational Education Center class, following which they returned to their homes for three months. They had just returned for another six-day class session. All of them vividly described the problems they had with castrations before they saw the tape: The pigs would

swell up, and they often had to get a shot from the vet to counteract the swelling; shortly before the presentation, a large pig had died from the aftermath of castration; and the castration wound was usually exposed in such a way that the chickens would peck at it and aggravate it.

Following the presentation, all of the 10 had either performed, or had seen others perform, successful castrations using the new method. None of the castrated pigs became swollen or suffered problems of any sort, including the chicken pecking.

I asked them if they planned to continue in the new method, and they responded with a burst of laughter. One said: "Why should we go backward?"

16. Has an effective training program been established directed toward the service tasks envisioned within the program?

The proposal included two training programs: an initial five-month training program, and a program of peer training in which the initial trainees would train other students, who would in turn train others, and so on.

The initial training program has been completed, and the trainees are performing successfully in their home organizations.

Peer training has not been systematically implemented as suggested in the proposal, although it has occurred sporadically at each of the program sites I visited. As originally proposed, the impetus for peer training was to have been the continual cycles of students moving through the formal education settings that were originally the planned implementation sites. The actual participating organizations do not conduct peer training as a matter of course, but rather when people within the organization or outside of it, because of their own personal interest, request training, or when the organization sees a need for another person to begin work within the video program and he is given what amounts to on-the-job training.

While such training is informal, the technicians do rely on the materials prepared in the beginning by John Westbrook. Those materials should be updated.

Rafael Taveras has published new information regarding technical aspects of the equipment, but techniques developed in areas with less immediate impact -- such as techniques of implementing community presentations, use of video for self- and group evaluation in farmer training, and so on -- are not documented. The training program would be strengthened by a revision of the training materials to reflect the accumulated program experience.

SOME PROBLEMS

Coordination of Video Production

With so many separate centers involved in producing videotapes, duplication can occur unless there is coordination. The coordination program that was developed works as follows: At the beginning of each month, each center sends a report and a 30-day plan to CNIECA. CNIECA duplicates the reports and circulates them to all of the centers. In this way, the centers are aware of the plans and activities of the others, and can avoid doing what someone else has already done.

I observed what appeared to be a breakdown in the system. The Higuery technicians sent reports to CNIECA for two months, and then stopped doing so because they received nothing in return. CNIECA directors attributed that to a temporary problem due to the replacement of a communications officer; nevertheless, the situation deserves attention from the IDEAS staff.

Transportation

Transportation is a serious problem, especially at the Vocational Education Centers. In many cases, only a single vehicle is available to conduct all of the Center's business, and video productions are often of less urgency than other matters.

The problem is caused by the Dominican government's delay in providing counterpart funds that were to accompany the AID loan that established the Vocational Education Program. The government funds were to have provided five minibuses, six station wagons, and seven small cars to the Vocational Education Centers. Had those funds been provided, each location would have had an additional three vehicles, in some cases more. The lack of transportation has been supplemented by the IDEAS staff, at considerable unplanned-for time and expense.

Since the problem is connected with the counterpart funds for the loan-027 program, AID is in a position to apply some pressures toward its resolution. Harry Wing indicated that complete fulfillment of the conditions of the first loan is likely to be a condition for the awarding of a second loan, and it may be that the transportation problem will thus be resolved.

Evaluation

During their training, the video technicians were taught to gather base-line data and other information required to evaluate the success of their video presentations. I was not able to observe instances where this had occurred.

Program expansion

The partnership with CНИЕCA has resulted in a considerable expansion of the scope of the project. The original plan as presented in the proposal was to have involved two regions with a total round-trip travel time to all cooperating locations of about six hours. With CНИЕCA's involvement, the number of regions involved went from two to seven, with a total round-trip travel time to all program locations of over 30 hours. The following additional activities, not described in the proposal, also took place: extra training programs as documented earlier in this report, planning and purchasing the five additional CНИЕCA portapak units, and planning for and equipping the mobile units that arrived during the implementation of the program.

I do not believe it would not have been possible to carry out this expanded program under the funds that were provided for the two-zone implementation that AID expected under the proposal. The expansion came at the initiative of CНИЕCA, and was agreed to by the IDEAS staff. The IDEAS staff did not inform AID of the nature of, and reasons for, these expansions as they occurred. Rather, they were hinted at after the fact, but not clearly presented, in a request for supplemental funds that was denied.

In the absence of supplemental funds, much of the additional work has been carried out on the basis of personal contributions of time and money on the part of the program participants. For example, Rafael Taveras, the electronics technician responsible for equipment maintenance, has been paid little for his activities on the program since January, and nothing since May, and he has purchased parts for program equipment using his own money. The Secretary of Agriculture has agreed to pay Rafael at the rate of RD\$200/month beginning with the month of June, for the maintenance

of the program equipment. The order is still being processed.

RECOMMENDATIONS

1. This program, in its actual implementation, has become strongly integrated with the small farmer education program funded under AID loan 027. Both programs are stronger because of their integration than either could have been alone. AID's continuing involvement in the small farmer education program through the second loan provides an opportunity to continue monitoring the video program within the Vocational Education Centers. I recommend that the integration of the two programs be officially acknowledged by a memo to program participants. Such a memo, perhaps drafted by Harry Wing and David Cohen, would add legitimacy to the Vocational Education Center video technicians' efforts to implement video instruction within their programs, and would assure AID's continued monitoring of the video program.
2. One of the video units purchased by the Vocational Education Program is now located in Horacio Ornes' office. The intention was to use it as part of the public relations efforts of the Department of Agriculture. The equipment with which Jose Reyes made his 111 presentations to over 26,000 people has been returned to the video trainees at the Santiago Vocational Education Center, and Jose, the most active person in the program, no longer has equipment with which to continue his enthusiastic involvement. I recommend that the unit in Horacio's office be placed at CNIECA in San Cristobal, and that the unit at CNIECA that was provided under the original IDEAS grant be given to Jose Reyes at INTABACO. Harry Wing would probably be the person most likely to arrange a smooth transfer.

3. It is important to strengthen the leadership among the Dominican representatives, and a time will come when AID will consider sending people to the United States for further training. While I support such an effort, I recommend that no person be removed from his current active role in the program for any purpose, including further training, until a replacement has been fully trained. As the program continues to be strengthened, less of the knowledge required to run the program will be only in the heads of specific people, and more of it will become part of institutional traditions and operational patterns. Until that occurs, I recommend careful consideration of any AID-directed efforts to move program personnel.

4. Many things have been learned through this program about ways to increase the effectiveness of videotape technology in rural education settings. Many specific techniques developed by the technicians in both the technical and the human relations aspects of their jobs can be shown to have had positive outcomes. These techniques should be documented. I recommend that, before the program's conclusion, the video cameras be turned upon the participants themselves as a means of documenting what they have learned. Such a tape would be useful for AID personnel in other LDC's, for non-AID professionals in development education, and certainly for IDEAS in their efforts to continue work in this area. It seems most appropriate to me that such an effort be funded, if needed, through counter-part contributions from IDEAS, supported by the contribution of personnel and equipment on the part of the Dominican organizations.

5. I recommend that, during the remainder of the program, the IDEAS staff concentrate their efforts on the following: (1) Establishing funding for the maintenance of the equipment from the Department of Agriculture; (2) The documentation videotape I referred to above; (3) Strengthening the coordination program within CNIECA; (4) Establishing the capability at ISA for a continuation of the program under the direction of Juan Castellanos, with the possible introduction of the modified-Foxfire community documentation approach at ISA as originally proposed; and (5) Updating the training materials to reflect program experience.

APPENDIX A

List of Persons Interviewed

PEOPLE INTERVIEWED

The following people were interviewed in order to gather data for this evaluation. They have been listed in the order in which they were interviewed.

John Westbrook, IDEAS, Inc. Caribbean Representative and Field Director of the Video Program.

Pedro José Ferrero, Supervisor, Higue Vocational Education Center

Elpidio Gonzáles, Video trainee and teacher, Higue Vocational Education Center

José Martínez, Video trainee and teacher, Higue Vocational Education Center

José Ramón Rodríguez, farmer, San Rafael de Yuma

Alberto Rodríguez, farmer, San Rafael de Yuma

Carlos Alberto Rodríguez, farmer, San Rafael de Yuma

Isidoro Amparo, farmer, San Rafael de Yuma

Francisco Mota Perosa, farmer, San Rafael de Yuma,

Harry Wing, Agricultural economist, AID/DR

Rafael Taveras, electronics technician

Amilcar Romero, Acting Sub-secretary of Agriculture, and Director, CNEICA

Manuel Vargas Payano, Video trainee and Head of Technical Dissemination, CNEICA

Fremio Mejía, Video trainee and National Head of the Video Program, CNEICA

Rodolfo de León, Head of Rural Training, CNEICA

Giovanni Brito, Associate Director for Training, CNEICA

Fernando Mejía, Video trainee and Assistant to Head of Technical Dissemination, CNEICA

Rafael Díaz, Assistant to Head of Technical Dissemination, CENDA

Juan Sánchez, Video trainee and Teacher, Santiago Vocational Education Center

José Reyes, Video trainee, and Head of Public Relations and Communication, North Zone, Department of Agriculture

Juan Castellanos, Video trainee, and Professor and Head of Communication
and Extension, ISA

Miguel Angel de León, farmer, Las Paloma

Hector Henríquez, farmer, Colorado

Juan Bautista Guzmán, farmer, Cercadillo

Tulio Núñez, farmer, Cercadillo

Juan Antonio García, Colorado

Pedro Núñez, farmer, Cercadillo

Jose Ferdiliz, farmer, Las Palomas

Francisco Antonio Peña, farmer, Las Palomas

Ramón María Aria, farmer, Las Palomas

Noel Contreras, Video trainee and teacher, San Juan de la Maguana
Vocational Education Center