

PD-ABP-019
93775

REPORT ON THE TRAINING PROGRAMS OF THE
U.S. AGENCY FOR INTERNATIONAL DEVELOPMENT/PARAGUAY
ADMINISTERED BY THE
LATIN AMERICAN SCHOLARSHIP PROGRAM OF AMERICAN UNIVERSITIES
1986-1990

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EXECUTIVE SUMMARY

The Latin American Scholarship Program of American Universities (LASPAU) has administered three contracts for USAID/Paraguay since 1982 under USAID's Latin American and Caribbean Training Initiatives. The first, Paraguay #1, trained eight scholars in the U.S.: five in master's programs, two in professional postgraduate medical internships, and one in a doctoral program. The second, Paraguay #2, trained two scholars at the master's level and one at the doctoral level. The third contract, Paraguay #3, has trained ninety-four individuals in long-term, short-term individual and short-term group programs.

As a result of LASPAU's careful selection, scholar monitoring and follow-up procedures, all participants have successfully finished their programs, and many have done absolutely outstanding work. Also, due to careful programming, good management, and tuition savings through LASPAU's special relationship with over two hundred North American universities, all three contracts have been under budget and/or have exceeded the number of participants projected for training. For example, \$125,000 was budgeted for training eight basic science and math teachers for four months in the U.S. in a Spanish-language program, yet LASPAU managed to train nine teachers for only \$87,000 -- a cost savings of \$38,000 plus the training of an extra person. A six-week English language teaching methodology program originally budgeted to train eight teachers for \$100,000 ended up training sixteen teachers for only \$80,000.

This report deals with Paraguay #3, and the basis for this project's design was the Country Training Plan (CTP) formulated in 1985. This CTP designated USAID/Paraguay's priority training areas as: 1) human resource development, and 2) technology transfer, with the focus primarily on the private sector. The four priority areas within human resource development were identified as: 1) foundations for development training (basic science/math education and English language skills' teaching); 2) private sector initiatives (management, technology transfer, export promotion); 3) rural development, natural resources, and environment; and 4) development policy issues and leadership opportunities.

Each individual chosen for training is sponsored by a Paraguayan institution and upon completion of training is expected to return to support the educational/development goals of that institution. Sponsoring institutions include the Universidad Católica, the Universidad Nacional, the Secretaría Técnica de Planificación, the Instituto Nacional de Tecnología y Normalización, the Centro Cultural Paraguayo Americano, the Escuela Agronómica Salesiana 'Carlos Pfannl,' the Instituto Superior de Educación (ISE), the Servicio Nacional de

Saneamiento Ambiental (SENASA), and the Ministerio de Salud.

Since 1986, ninety-four Paraguayans have been trained in Paraguay #3 programs. This has included fifty women and forty-four men. Over 80% of them have been from economically disadvantaged backgrounds, and over one third of these have been from rural backgrounds. Historically Black colleges have been used to train 28% of the total participants. Long-term training has included fifteen individuals (twelve men, three women) in both master's and doctoral programs in fields ranging from business administration to computer science to chemical engineering to plant pathology. Short-term individual training has included thirteen Paraguayans (nine men, four women) in areas such as aquaculture, environmental policy, telecommunications, textile exporting, tax administration, and construction of price indexes. Short-term group training has included sixty-six individuals (forty-three women and twenty-three men) in six programs. Two programs were for basic science and math for college teachers, two were for English teaching methodology for teachers of English as a foreign language, one was for rural health for rural nurses and lay health workers, and one was for rural sanitation for rural sanitary inspectors. All training was in Spanish, with the exception of the English programs, and the latter two programs were held at a historically Black college.

Program evaluation and one-year post-program followup have shown that home institutions as well as participants have been very pleased with their training, and trainees have rated both academic as well as social and cultural aspects of it as good to excellent. Fully 93% of the participants are now back at either their sponsoring institutions or working at a job in a similar field in Paraguay using their newly-acquired skills. Another 6% are still in training in the U.S. Only one individual has not yet returned to Paraguay, due to her marriage to a U.S. citizen.

OVERVIEW OF THE USAID/PARAGUAY - LASPAU TRAINING PROGRAMS

Since 1982, LASPAU has administered three contracts under USAID's Latin American and Caribbean Training Initiatives to provide training for USAID/Paraguay. For ease of referral, these projects will be known as Paraguay #1 (1982-87), Paraguay #2 (1984-88), and Paraguay #3 (1985-94). In all programs, whether short or long term, individuals or groups have been brought to the U.S. for their training.

Paraguay #1

The first of these projects (Paraguay #1) began long-term training for eight Paraguayan scholars in 1983. Five of these individuals spent approximately two years in the U.S. and obtained master's degrees in the fields of biochemistry, forestry economics and management, agricultural economics, and animal science. Another two of the individuals, who were medical doctors, did professional postgraduate training at university-affiliated medical institutions -- one in

infectious diseases for two years and the other in psychiatry for one year. The other Paraguayan scholar completed a four-year Ph.D. program in plant breeding and genetics. All of the scholars returned promptly to their sponsoring institutions in Paraguay and are either teaching, conducting research, consulting in technical fields or practicing medicine. The scholar who completed his doctorate is now the director of the newly-formed and Inter-American Development Bank-supported Center for Multidisciplinary Research at the Universidad Nacional. This center was especially established to promote research in biotechnology. (See Appendix A for further details on scholars' names, U.S. universities attended, dates of study and employment in Paraguay.)

Paraguay #2

The second USAID/Paraguay-LASPAU project (Paraguay #2) continued to bring promising young Paraguayans to the U.S. for long-term training. Of the three scholars included in this program, two received master's degrees in agricultural economics and have returned to Paraguay to their positions at the Ministerio de Agricultura y Ganado. The third scholar, after completing his master's degree, was offered full funding by his U.S. university to continue on for a Ph.D. He is now working on his doctorate in fish production and genetics, and upon completion will return to a teaching position in the Department of Fisheries at the School of Veterinary Science at the Universidad Nacional. (See Appendix B for further details.)

Paraguay #3

The third USAID/Paraguay-LASPAU project (Paraguay #3) is much larger in scope than the previous two, and to date has included ninety-four participants. Prior to its inception, USAID officials and international development consultants formulated a multi-year Country Training Plan (CTP) which has been the basis for designing programs and choosing participants. Both long-term and short-term individual training have been implemented, as well as short-term group training. Groups have included rural nurses, rural sanitation workers, English teachers, and science and math teachers at both the the teachers' training college and university levels. Training has been conducted in Spanish as well as English and in large urban universities as well as in community colleges and a rural historically Black college (HBCU).

TRAINING UNDER PARAGUAY #3 (1986-90)

The Country Training Plan (CTP), which has been the basis for the project design in Paraguay #3, mentioned several areas of concentration as being useful for Paraguay, which is presently classified as an advanced developing country (ADC). AID's priority development areas were designated as: 1) human resource development and, 2) technology transfer, with the focus primarily on the private sector.

The human resource objectives have been carried out largely by means of a participant training program, through the strengthening of selected in-country training institutions. The CTP identified and justified four priority subject areas of human resource development in Paraguay: 1) foundations for development training (basic science/math education and English language skills' teaching); 2) private sector initiatives (management, technology transfer, and export promotion); 3) rural development, natural resources, and environment; and 4) development policy issues and leadership opportunities. Training has focused on these areas and, when possible, AID, the United States Information Agency (USIA) and the Peace Corps have collaborated to achieve many of the targets set forth in this CTP.

Technology transfer training has focused mainly on key individuals in key posts. The training areas have included telecommunications, computer applications, construction management, construction of price indexes, and international tax administration. Both private institutions as well as U.S. government agencies have conducted the training programs.

The training strategy has included long-term academic training (M.A./M.S. degrees, Ph.D.s, and professional medical fellowships), as well as short-term non-degree academic/professional training. Short-term participants have taken part in both group and individual programs. These have been conducted in both English and Spanish, depending on the need of participants.

Throughout the past five years of this project, LASPAU has been very aware of optimizing value for cost. For short-term training under this project cost savings were realized by LASPAU's careful negotiating with subcontractors on USAID/Paraguay's behalf. For long-term training LASPAU utilized Handbook 10 rates, but made significant savings by obtaining tuition waivers in over 85% of the placements. As of 12/31/89 the program cost per participant month for the training in Paraguay #3 was \$1697. This includes a ratio of 56% long-term to 44% short-term participant months. Broken down by type of training the costs were \$882 per participant month for long-term scholars and \$1355 for short-term individuals. Short-term group training cost \$3099 per participant month, including domestic U.S. airfare for the two English teacher groups and both domestic and international airfare for the economically disadvantaged, rural nurses and sanitation workers. The short-term group per participant month training cost, not including the 15% which was airfare, was \$2634. Administrative costs for the same period for the same 56/44 ratio were \$299 per participant month. Administrative costs are, therefore, less than 15% of the total program cost.

Long-term Training

Universidad Católica

As stipulated in the CTP, certain Paraguayan institutions were targeted for support. Much of the long-term training in Paraguay #3 has been directed toward strengthening one of these institutions, the Universidad Católica, and in particular its School of Accounting and Administrative Sciences. This school

has recently begun an MBA program with help from the Instituto Centroamericano de Administración de Empresas (INCAE). Professors from INCAE have been teaching most of the courses, but it is hoped that professors trained under the USAID-LASPAU program will soon be able to replace the INCAE professors.

The School of Science and Technology at the Universidad Católica was also targeted for support in the areas of computer science, electronics and civil engineering. It should be noted, however, that in Paraguay there is no such thing as a full-time faculty at either the Universidad Nacional or the Católica, and most professors are so poorly paid that they must have a full-time job to support themselves, in addition to their teaching. University teaching, therefore, is a very part-time activity for most professors, even though many of them are very dedicated to improving both curriculum and teaching conditions.

The following individuals have been chosen under this program to support faculty development at the Universidad Católica:

Sergio Gómez

Mr. Gómez was chosen in 1985 for master's studies in computer science. This is a priority field for training professors for the School of Science and Technology, as they are in the process of setting up a digital electronics lab. Mr. Gómez started his program in 1986 at the University of Dayton, graduating in 1988 with a very high grade point average and much praise from his academic advisor. He was slated to return to Asunción to work for the company, Informática, S.A., where he had been employed prior to his program in the U.S., as well as to teach a couple of courses in computer science at the Universidad Católica. Upon his return to Paraguay, however, he was sent by his company to work on the Itaipú Power Project in eastern Paraguay, far from Asunción. Although he tried to find out about teaching at a Universidad Católica branch campus near Itaipú, it was impossible due to scheduling conflicts. He hopes to be able to teach once he returns to Asunción.

László Farkas

Mr. Farkas was chosen in 1986 to do master's degree studies in civil engineering, specializing in construction engineering and management. This is another priority area for faculty support in the School of Science and Technology, which has a major in civil engineering, but no specialization in construction engineering and management. Mr. Farkas started his program in 1987 at the University of Missouri, after one month of English training. After only 16 months of study he graduated with his master's degree and returned to Paraguay. Presently he is employed by Shell in a technical position and plans to start teaching a new course next semester at the Universidad Católica in economics and finance for engineering students.

Gladys Benegas

Ms. Benegas was chosen in 1988 to do a doctorate in a business-related area as part of the faculty development effort to support the new MBA program. She

received her MBA at the Instituto Centroamericano de Administración de Empresas (INCAE) in Costa Rica through a USAID/Paraguay grant, and was chosen to continue at the doctoral level in the area of economic and social development. After a six-month English language program, she started her doctoral studies at the University of Pittsburgh's Graduate School of Public and International Affairs in 1989. She plans to finish during the 1991-92 academic year. To date she has an 'A' average, and should return to the Universidad Católica well equipped as a professor for the MBA program.

Beltrán Macchi

Mr. Macchi was chosen, like Ms. Benegas, for a doctoral program in an area related to business administration. He was accepted by the University of Houston to do a DBA in finance. After completing his MBA at INCAE with outstanding success and attending a two-month English language program at SUNY-Buffalo, however, he decided to return to Paraguay for personal reasons. Since his return he has taught several short courses for the new MBA program at the Universidad Católica and is now the director of the executive seminar program.

César Cardoso, Antonio Brítez and Carmen Ortiz

These three scholars were all chosen in 1989 to do MBA programs starting in the fall of 1990. Mr. Cardoso will be attending Columbia University, Mr. Brítez will be at Western Illinois University, and Ms. Ortiz will be enrolled at Southern Illinois University. The present plan is for them to return to be on the faculty of the MBA program at the Universidad Católica.

Other Institutions

Remembering that both public and private sector institutions have been selected for training of personnel in areas as diverse as development policy and English as a second language, the following institutions have been represented by at least one scholar: the Universidad Nacional, the Secretaría Técnica de Planificación, the Instituto Nacional de Tecnología y Normalización, the Centro Cultural Paraguayo Americano, and the Escuela Agronómica Salesiana 'Carlos Pfannl'. Candidates selected for training from these institutions have been expected, upon their return to Paraguay, to be reincorporated into these same institutions or others of a similar nature.

Eduardo Vuyk

Mr. Vuyk was selected in 1985 to do a master's degree in chemical engineering. His sponsoring institution was the Secretaría Técnica de Planificación. He began his program in 1986 at Manhattan College and graduated, with a straight 'A' average in 1987. He then stayed on to take advantage of a practical training assignment with Stauffer Chemical Company in New York, which gave him exposure

to different aspects of engineering process design. He received training in the areas of environmental affairs, process engineering, license engineering and computer applications. Both Mr. Vuyk and the Stauffer Chemical Company were very satisfied with the training, and the original six-month internship was extended to eighteen months. He is presently living in Paraguay and working as a Latin American representative for a U.S. company, which requires him to do extensive travel in Latin America.

Luis Ramírez

Mr. Ramírez was selected in 1985 to pursue a master's degree in economics. He began his program in 1986 at Vanderbilt University and received his master's in 1987. Once back in Paraguay he was employed by the financial firm Shearson Lehman Hutton in Asunción. Last year he opened up and is in charge of their new office in Ciudad del Este, which serves Brazil from its location in eastern Paraguay. He would be very interested in the near future in a short-term internship at the Federal Reserve System in Washington, D.C., in order to better prepare himself to work in Paraguay's state banking system.

Guillermo Sosa

Mr. Sosa was chosen in 1986 to do a master's degree in public policy to support the development policy issues' category of the Country Training Plan. He, like Mr. Vuyk, was sponsored by the Secretaría Técnica de Planificación. Mr. Sosa began his program at the Fletcher School of Law and Diplomacy at Tufts University in 1987, after a six-month English language program. He specialized in economic development and international trade and investment. During the two-year master's program Mr. Sosa was very active in student affairs and, because of this, was chosen by his peers to represent the Fletcher School at a breakfast in Washington, D.C., with the President and Mrs. Reagan. After the successful completion of his degree in 1989, he returned to Paraguay where he was almost immediately appointed the economic advisor for the Paraguayan Embassy in Brasilia.

Alejandro García de Zúñiga

Mr. García de Zúñiga was chosen in 1985 to do a master's degree in chemical engineering. He was sponsored by the Instituto Nacional de Tecnología y Normalización. After five months of English language training, he started his master's program at the University of Missouri-Columbia in 1986. At the end of his first semester he decided to change from chemical engineering to the less theoretical program in food sciences. After an initially difficult period, Mr. García de Zúñiga did well and graduated from this department in 1988. He returned to Paraguay to a job at his sponsoring institution.

María de la Paz Peña

Ms. Peña was selected in 1986 to complete her master's degree at the University of Kansas. She had previously done one semester's worth of master's level work in the education/curriculum and instruction department there. She was sponsored by the Centro Cultural Paraguayo Americano (CCPA), the binational center, which administers the largest English language program in Paraguay. After the successful completion of her degree in 1987 and her attendance at the Teachers of English to Speakers of Other Languages' (TESOL) Convention in Miami, she returned to be the academic coordinator of the binational center in Asunción. In this position she has been successful in improving the level of English teaching by frequent teacher-training workshops and by encouraging her staff to get further training in English teaching methodology (see section on AID/CCPA-TEFL Program).

Vidal Rivelli

Mr. Rivelli was chosen to do a master's degree in plant pathology and crop physiology in 1986. After a six-month intensive English language program he began his academic program at Louisiana State University in 1987. After a very successful program, including a trip during the midwinter break to California to observe research and technology related to seed production and propagation of vegetative plant stocks, he graduated with a straight 'A' average in 1989. After graduation he went to the University of California at Davis to take special courses in plant pest problems and in the epidemiology of plant diseases. He has just returned to Paraguay and will soon be teaching and doing research at the Escuela Agronómica Salesiana 'Carlos Pfannl.'

Roberto Stewart

Mr. Stewart was selected in 1988 by his cosponsors, USAID and Rotary International, to do a master's degree in agronomy. He began his program in that same year at California State University - Chico. He should complete his program in 1990, at which time he will return to Paraguay to work as an agricultural advisor in the area of soil conservation and management, seed production, and agricultural production.

Juan José Aveiro

Mr. Aveiro was chosen in 1988 to do a master's degree in animal science with a specialization in animal reproduction and artificial insemination. His sponsoring institution is the School of Veterinary Science at the Universidad Nacional. After a month of English language training and orientation, he began his program in 1989 at the University of Missouri, which has an excellent group of faculty in this area. Mr. Aveiro has done very well and has a straight 'A' average up to this point. Upon completion of his degree he will return to teaching and research at his sponsoring institution.

Short-term Training

Short-term training has involved both individuals and groups and has focused on the CTP's priority areas (basic science, math, English, export promotion, rural development and technology transfer). Many of those participating in individual short-term training have been public sector officials sent to U.S. government-run programs in Washington, D.C., while others have participated in very individualized programs at universities throughout the U.S.

Short-term group training has included the public sector (Ministry of Health and Ministry of Education employees) as well as the private (English language school teachers). Groups have participated in rural health, rural sanitation, basic science and math pedagogy, and teaching English as a foreign language (TEFL) methodology. Each group was able to experience America through lectures, visits to local points of historical interest and family visits/homestays. All of the groups included individuals from economically disadvantaged backgrounds. Also, a historically Black college (HBCU), was used as the site for two group programs.

Short-term Individual Training

Short-term individual training programs have varied in length from one week to eight months. Due to the relatively short time period involved, and the desire to spend these limited training funds on course content rather than on English language, these programs have been conducted entirely in English. Most participants, therefore, have only been chosen if they are functionally fluent in English.

Walter Gill Morlis, from the Basic Science Institute of the Universidad Nacional (UNA), participated in an aquaculture training program from March to July 1986 at Auburn University, preceded by a three-month English language program. The aquaculture program consisted of both lectures and lab as well as field work in which each participant had his own pond for growing fish. Mr. Gill Morlis returned to teach at the UNA upon termination of the program.

In 1987 there were two short-term participants selected. Ana Mannarini, a professor of English language and linguistics from the Higher Institute of Languages of the Universidad Nacional, was chosen to attend the annual meeting of the Teachers of English to Speakers of Other Languages for a week in Miami, Florida. María Lloret de Fernández, from the Instituto Paraguayo de Estudios Geopolíticos e Internacionales, was sent to Indiana University to take courses in environmental policy and to work with professor Lynton Caldwell on matters of international environmental law from January to May 1987.

During the 1988 year six individuals were chosen for short-term programs in the U.S. Carlos Amarilla and Mario Centurión, MBA students at INCAE and possible AID candidates for a DBA in the U.S., were brought to the University of Toledo for a two-month intensive English language program. Vicente Fruet and Cristina de Ortiz were brought to Boston to work with professor Marc Lindenberg (Harvard University) for ten days in October to study the process of the 'case method' for possible use in the MBA program at the Universidad Católica. They also

looked at management training programs at the Bank of New England, the Sloan School (MIT), the Boston University Business School, and in the Public Affairs Program at the University of Massachusetts in Boston.

Also in 1988, Alvaro Caballero and Flaviano Garcete were selected for short-term professional and technical training. Mr. Caballero, executive director of the resources center of the Paraguay-Kansas Committee, was chosen to attend a two-week Information Resource Management Training Program sponsored by the Volunteers in Technical Assistance in Washington, D.C., in September. He then spent another two weeks at the University of Kansas working with a professor in program design and living with an American family. Mr. Garcete, deputy director of the Paraguayan Civil Aviation Agency, was chosen for a seven-week telecommunications program in the U.S. from September to November. He started by attending a Federal Aviation Administration Conference in Miami, then spent a month in Washington at a U.S. Telecommunications Training Institute, and finally spent two weeks in California at a conference on aviation security.

The 1989 short-term training roster included four individuals: Ruth Brítez, César Pose, Roberto Céspedes, and Carlos Gorostiaga. Ms. Brítez was selected for training to support the priority area of export promotion in the area of clothing and textiles. She attended an eight-month program at Kansas State University which was arranged by the Department of Clothing, Textiles and Interior Design and included some English language training, courses in apparel and textile marketing, a study tour to the New York City garment district, and an internship in a small retail store.

Mr. Pose, director of internal tax audits at the Paraguayan Ministry of Finance, participated in a seven-week program sponsored by the Internal Revenue Service. His first week was an internship at the IRS in Washington, in which he visited the departments of Examination, Taxpayer Service and Returns Processing, and Human Resources Management and Support. He then attended an International Tax Administration Training Seminar for middle management development in tax administration for six weeks in Washington and Cincinnati.

Mr. Céspedes, the senior researcher on the labor movement and employment at the Centro Paraguayo de Estudios Sociológicos, was selected to attend a two-month seminar on computer packages for users of labor statistics at the Department of Labor in Washington. This seminar was to acquaint participants with how computers work and how they can be used in their field and covered the following areas: computer literacy, microcomputers, minicomputers, mainframe computers, and networks and communications.

Mr. Gorostiaga, a consumer price index statistician at the Bank of Paraguay, participated in a six-week seminar at the Bureau of Labor Statistics in Washington on the construction of price indexes. The course included a conceptual framework of target population and sampling techniques, producer and industrial price indexes, and techniques for analyzing data on prices and expenditures.

In all cases, except one, of those involved in individual short-term training, participants have immediately returned to their employment in Paraguay upon completion of their U.S. program. Several have then shared their newly-acquired

knowledge with their colleagues, through mini-seminars at their place of employment.

Short-term Group Training

Basic Science and Math Training for Teachers from the Instituto Superior de Educación

Miami-Dade Community College was chosen as the site for the 1987 four-month basic science and math training program for nine teachers from the Instituto Superior de Educación (ISE). It was selected due to its reputation as one of the best community colleges in the U.S. and also because of its extensive list of bilingual (Spanish-English) professors, as the training was to be conducted in Spanish. The ISE was chosen as a priority institution in Paraguay, because it is the country's major secondary school teacher training institution.

A needs assessment was done at the ISE before designing the program at Miami-Dade. Math and science teachers were interviewed at some length and were also given written questionnaires to complete concerning their classroom needs, their professional needs, and the needs of their institution. They were asked to detail content areas within their broader subject area (biology, chemistry, physics and math) in which they were interested in receiving more information. Also, they were asked what kinds of methodological concerns they had. The ISE's director, Maxdonia Fernández, was asked similar questions as well as encouraged to suggest other complementary areas that would be useful to include in the four-month Miami-Dade program. English and computer literacy, two of the areas mentioned, were successfully included in the final program. The information gleaned from the needs assessment was discussed in detail with the program directors at Miami-Dade to aid them in program design.

The Paraguayan teachers started their academic program after an orientation which included lectures on U.S. history, values and customs; an in-depth tour of the campus; and site visits to various points of historic, scenic and cultural interest in Miami. The very full course load included fourteen hours of content-related courses as well as sixteen hours of English per week. The content courses included new developments in math and science as well as new methodology for teaching in these areas. The scientists were especially interested in the latest lab techniques. Both math and science teachers studied basic computer programming and computer applications to their areas of interest. Several students even managed to buy computers to take back to Paraguay to aid them in preparing class materials.

Another important part of the program was the opportunity for the Paraguayans to visit bilingual math and science classes at local high schools so as to see methodology in action. The teachers also took advantage of numerous invitations to share meals with American families in their homes. In addition, there were weekly field trips to points of cultural and scientific interest. These included visits to the Museum of Science, the Metro Zoo, Planet Ocean, the Fairchild Gardens, a water treatment plant, the Space Museum at Cape Kennedy, Epcot Center,

and the University of Miami Marine Lab and Physics Lab.

Comments from participants were very positive. A biology teacher from the ISE commented, " I have learned how much technology can help education by speeding up the process of doing things."

A physics teacher said, "This has been a beautiful experience that has allowed us to learn and also to become a part of the culture."

A math teacher wrote, "I have enlarged my knowledge and experience 100%, thanks to the excellent professors and organizers of this program, and I promise to share many times what I have learned."

Another math teacher said, "I want to especially thank you for the trip to Disneyworld and Epcot. This three-day trip was equivalent to many years of study. Without books, without pencils, without teachers, we have learned how human development makes scientific and technological development possible."

Participants in this program are now back at their home institution and three years after the program were found to still be very enthusiastic about their U.S. training. The three things that they mentioned as being most important as a result of their U.S. stay were 1) the new and different techniques for teaching their subject matter, 2) the marvelous introduction to computers and computer applications that they received, and 3) the spirit of unity and cooperation among themselves that was a result of their living together and depending on each other for four months in the U.S. Others also mentioned the influence of the greater freedom of women in their role within the family in the U.S. Several have continued their English studies because of the impetus given them during their stay in the U.S.

Most of the teachers have been using many of the new teaching methodologies or adapting them for use in Paraguay. They have also shared these new ideas and techniques with their colleagues. They were particularly pleased with activities that forced students to think and to think logically before being able to complete an assignment. The director of the ISE has been very supportive of her teachers' efforts in this area.

Computers have not yet come to the ISE, the principal secondary school teacher training institution in Paraguay, for both political and financial reasons. This was listed as a great source of frustration by training participants, because part of the math curriculum includes a unit on computers and computer literacy. This is being taught without any hands-on experience. Additionally, the ISE was previously designated as the site for a computer-assisted continuing education center for teachers from all over Paraguay. This project, needless to day, is also on hold. The government is in a state of transition still from the Stroessner era, and anyone connected with that government, including the director of the ISE, is uncertain of the future. This sense of insecurity and uncertainty about the future was very evident among the ISE professors and appears to be the major reason for there being no new projects this year in this government-run institution.

The sense of camaraderie and the feeling of unity among the ISE participants in

the AID training program is very strong. They are a group that saw 'how it can be done' in another country, the U.S., and continue to be very committed to living up to what they learned in their four months of study at Miami-Dade Community College. The vast majority of them would jump at the chance for further training in the U.S.

Basic Science and Math Training for Professors from the Instituto de Ciencias Básicas, the Instituto Superior de Educación, and the Instituto Agronómico Salesiano 'Carlos Pfannl'

A training program, similar to the one in 1987, was held again for four months in 1988 at Miami-Dade for math and science professors from both the university and teachers college level. There were three scientists (a chemist, a geologist, and a biologist) and seven mathematicians. Courses were similar to those of the 1987 program, although more individualized for the content areas. Also, there were fewer hours of English, because evaluations of the 1987 program had shown that the participants had been overloaded with six hours of class a day, which had included three hours of English. The computer instruction was more oriented to basic programming and wordprocessing skills (BASIC and Wordstar) and computer applications to each participant's field. School visits to bilingual science and math classes at both the junior and senior high level proved to be very interesting to the Paraguayans.

Again, participants were given an orientation which included an introduction to American history and culture, a campus tour, and a tour of Miami. They lived in housekeeping apartments in the Dupont Plaza Hotel, but many weekends were spent dining or having parties at the homes of American friends. There were weekly, or sometimes weekend, trips to museums, state parks and other areas of interest. These included visits to Key Biscayne, Vizcaya, Planet Ocean, the Science Museum and Planetarium, the Seaquarium, Fairchild Gardens, Matheson Hammock Park, Coral Castle, Disneyworld, Epcot Center, Cape Kennedy, Pennekamp Underwater State Park, the Metro Zoo, a youth fair, the Lively Arts Series (tickets to seven different performances), Homestead Tropical Research Experimental Station, and an orchid show.

Weekly meetings of all participants with the program coordinator enabled issues of a curricular or personal nature to be dealt with on a timely basis. Several participants commented on how much they appreciated the caring nature of the program's directors, Maureen O'Hara and Angela González. While 60% of the Paraguayans felt the program length was appropriate, 40% indicated that they could have used more time. Overall, comments on the program were extremely positive.

Estela Cárdenas, a Paraguayan math teacher from the ISE, said, "This type of program makes it possible to establish a parallel between what we learn in Paraguay and what we learn here. Through our participation in workshops, we can make comparisons of the methodology of both countries."

Gustavo Bañuelos, a math professor from the ICB, added that "Although much of the information we were taught here was basically the same, we learned how to better apply the knowledge, for example, on a computerized system."

Mirta Robadín, an agricultural engineer who teaches families of low-income farmers in Paraguay, commented, "I have found the laboratory techniques here to be much more advanced, so I've learned what type of equipment I can best use in my country."

As with the first group of math and science teachers, members of this 1988 group are now all back teaching at their Paraguayan institutions. Several have increased responsibilities and one is working directly with the Ministry of Education using computers in preparing educational statistics for Paraguay.

Teaching English as a Foreign Language (TEFL) Methodology Program I

San Diego State University's American Language Institute (ALI) was chosen from among many excellent institutions as the training site for the sixteen teachers of English as a foreign language. As one of the priority training areas in the CTP for short-term training, English language teacher training for Paraguay plays an important role in opening up that country's participation in economic and technological spheres at an international level.

The participants were chosen after an oral interview in English in which they were asked about their experience in teaching English, their goals, and their reasons for wanting to study in the U.S. They were also required to submit scores on standardized English tests such as the TOEFL or ALIGU, a letter of recommendation, a C.V. and a transcript. Only teachers with an excellent command of English were chosen, as this was not a program to learn English, but rather a training course on new methodologies for teaching English.

As this course had the backing of both USIS and USAID, it was primarily concerned with supporting the English teaching efforts at the binational center in Asunción, the Centro Cultural Paraguayo Americano (CCPA). Thus, eight of the teachers chosen were from the CCPA and five from other Paraguayan English language schools. Due to the fact that USAID Uruguay works closely with USAID Paraguay, three Uruguayan English teachers were added to the group to take advantage of the group training already arranged for the Paraguayans.

The six-week intensive TEFL program lasted from June 21 to July 31, 1987, and included both theoretical as well as practical aspects of teaching English. Topics covered included current theories and methods of TEFL; syllabus design; techniques for teaching reading, writing, grammar, culture and oral/aural skills; developing materials for EFL; an orientation to the U.S. education system and visits to three schools; and an evaluation of materials for classroom use. The latter was accomplished by means of student textbook evaluation at a book fair and through software evaluation at a computer fair. Students were also asked to keep a journal, which not only gave them practice writing in English, but which also made them think about their experiences in a new culture.

To provide as intense an experience in American language and culture as possible, the participants lived with American families in San Diego. There were many social activities organized with the families, with the ALI staff and with visiting lecturers. Also, participants enjoyed a city tour, a harbor excursion,

a visit to Disneyland, dinner and a musical in Balboa Park, and several films dealing with American culture.

The participants were very pleased with the academic program and very impressed with the educational opportunities in the U.S. and said enviously that people in the United States who do not have an education lack desire, not opportunity. María José de Chávez, one of the Paraguayan teachers, commented, "I am absolutely amazed at the way the U.S. government lays educational opportunity before the feet of everyone in the country, whether they are citizens or not."

Stella Netto, another teacher, added that, "The schools go out to find dropouts and encourage them to return. That is incredible. It shows they really care about students."

The Paraguayans were also very impressed with the U.S. efforts in the area of bilingual education. One participant commented, "We are amazed to see the U.S. government providing bilingual programs in many languages to give everyone the best possible chance to succeed. And they don't just do it for people who have lived in the United States for years. They do it for new immigrants, for their children and for the parents. That is truly remarkable."

The sixteen Paraguayan and Uruguayan TEFL teachers were given a post-program evaluation. They were very pleased with the academic program and had prepared many materials to take back home for immediate use. Six teachers from the binational center in Asunción had completely revamped the testing for the final exams for the first three courses in their English series, so as to make the tests more communicative to reflect what was really taught in class. Other teachers had made audio and video tapes of interviews with Americans discussing certain aspects of American culture (dating, dancing, family life, etc.). Still other teachers had prepared advanced English curricula by skill area (writing, reading, listening/speaking) as taught at the American Language Institute. Many teachers had copied news and other programs off the T.V. onto video cassettes for use in their classes.

In a one-year post-program visit to the binational center in Asunción the influence of the TEFL Methodology Program in the U.S. was clearly evident. As one of the purposes of the group program was to train a core of professionals who would then share their skills with others, each of the participants had given a mini-workshop to other binational center teachers on some aspect of their TEFL methodology training in the U.S. Also, the center's curriculum had been significantly modified and textbooks had been changed in an effort to further improve the English program.

Teaching English as a Foreign Language (TEFL) Methodology Program II

A second TEFL program, similar to the first, was conducted for six weeks from January to March 1989, again at San Diego State University's American Language Institute (ALI). Eight Paraguayan English teachers were chosen to attend, all from the binational center.

An innovative feature of this second TEFL program was the introduction of the "buddy system." Participants were assigned an ALI teacher as a "buddy," and were

encouraged to visit the buddy's classes frequently and to meet informally to discuss the classes and related topics. This enabled the Paraguayan teachers to have close contact with a U.S. English language professional.

Another innovation was the chance for the Paraguayans to improve their own English language skills through the choice of elective classes in different topics in English. These included courses in idioms, slang, marketing, and TOEFL preparation. This addition to the program was a result of recommendations from the first TEFL program's participants.

The most important addition to the second TEFL program was the opportunity that participants had to attend the Teachers of English to Speakers of Other Languages (TESOL) Conference in San Antonio, Texas, at the end of their stay in the U.S. The TESOL Conference is the most important professional meeting for TEFL teachers. It not only enabled the Paraguayans to attend numerous very enlightening sessions on TEFL and to meet with other English teachers from all over the world, but it also helped to develop the importance of professionalizing English teaching in Paraguay. In fact, since then, the TEFL teachers have organized a Paraguayan TESOL. As mentioned previously, the lack of a sense of professionalism in teaching and of considering teaching (both university and primary/secondary level) as a worthy career has had extremely serious negative effects on any efforts to improve the educational system in Paraguay.

In a June 1990 post-program evaluation it was found that the great majority of the twenty-four English teachers trained in TEFL teaching methodology are back teaching at their home institution, which for the majority of the Paraguayans is the Centro Cultural Paraguayo Americano (CCPA), the binational center. The teachers felt that the quality of their teaching had really improved as a result of their methodology training at San Diego State University's ALI, and that in turn had raised the overall quality of teaching at the CCPA. The academic director of the CCPA, Pacita Peña, herself an AID master's program scholar, has been very supportive of her teachers' U.S. training and has been pleased with the results.

One of the most important techniques learned in the U.S., according to many teachers, was how to teach communicatively. As one teacher commented, "My students now learn how to communicate using the English language in a natural way." Other teachers said that as a result of using the methodologies their classes were more lively and the students were more enthusiastic. Better class planning was a skill also mentioned by many that was a result of their U.S. training. Several teachers also indicated that due to their course at San Diego they felt more comfortable with themselves as teachers.

The social and cultural experience of spending six intensive weeks in the U.S. was also seen as an important part of the AID training by most participants. The opportunity to live with an American family was cited by many of the teachers as a very important part of the course. It has helped them be more aware of what and how to teach about U.S. culture.

Rural Health Program

During the month of August 1987, fifteen Paraguayan rural health workers (seven nurses and eight nurses aides/volunteer health workers) attended a rural health program at North Carolina Central University, a historically Black college in Durham, North Carolina. The group was accompanied by Teresa Wood, an American Peace Corps volunteer working in health programs in Paraguay. The program, conducted in Spanish, included practical courses on how to solve health care problems as well as a course on the philosophy and methodology of health education.

Paraguayan participants were chosen with help from the U.S. Peace Corps in Paraguay. As the goal of this group training program was to train rural health care workers in widely scattered settlements (Villarrica, Coronel Oviedo, Caaguazú, San Estanislao, and Caazapá) and many Peace Corps volunteers (PCVs) have been assigned to work in rural health care in recent years with a Paraguayan counterpart, the PCVs provided an important link in identifying eligible participants. Through a monthly PCV newsletter, PCVs in Paraguay were asked to nominate their colleagues or other health workers that they felt could benefit from a training program in the U.S. These nominees then completed a simple application and were later interviewed by USAID, LASPAU, and PCV representatives. Applicants chosen were selected on the basis of need in their area, their ability to transfer knowledge to others, and recommendations from PCVs or supervisors.

Curriculum needs were determined by speaking with Paraguayan Ministry of Health officials, the Peace Corps health coordinator, and the rural health care workers themselves during the interviews. Due to the wide variety of educational backgrounds among participants, from lay health workers to head nurses, the participants were divided into a basic and an advanced group for training purposes.

Classes were held for six hours a day and topics covered included disease prevention (parasites and respiratory problems), hospital/clinic administration (advanced level only), maternal-child health and diarrhea control, nutrition, and methods and materials in health education. Participants were given a "learning kit" to use in some of their classes. These kits included items such as stethoscopes, baumometers, thermometers and other instruments which would be practical for use in rural Paraguay. Also, each participant received a copy of the book, Donde no hay doctor, as well as another book on helping health care workers to learn.

To supplement the in-class instruction and to enable participants to experience American culture, there were many field trips to points of historic, cultural and professional interest. These included visits to museums, city tours of Raleigh and Durham, a beach trip, a baseball game, swimming, bowling, church and dinners at the homes of several families. Probably the most interesting professionally-oriented visits were to local hospitals, clinics, and the Newton Grove Migrant Workers Medical Center. The latter, in many ways, closely approximated the health care situation in Paraguay. For this reason many of the practices and techniques used at Newton Grove were immediately transferable to the Paraguayan scene.

In a three-year post-program evaluation in June 1990 of all of the AID-LASPAU training programs, it appears from comments of the participants that this one had the most impact on its members as well as on the communities from which the participants came. The rural health workers not only learned new information, but more importantly, they learned how to do things more effectively. Additionally, over a quarter of the fifteen participants have been promoted, and one woman is now coordinating the development and evaluation of the Ministry of Health's programs for all of central Paraguay.

The vast majority of participants said that upon their return to Paraguay after their U.S. training they not only wanted to do more, but that they felt much better prepared to do more. All commented on their change of methodology for giving health education talks. Before U.S. training they lectured to their audience, but now they actively encourage audience participation and in so doing find that there is much more interest and much greater exchange and learning taking place.

Another often-mentioned result of the U.S. training was the much greater use of illustrations, flip charts, and other audio-visual material in their health education talks. The rural nurses said that they appreciated having been taught how to make their own materials during the program at North Carolina Central University. They remarked how they felt much more creative and how they enjoyed the greater personal contact with their audiences. They also commented that it was much easier to get their point across by using the new teaching methodologies.

The generosity and hospitality of their new-found friends in the U.S. was often cited as the most important sociocultural experience in the U.S. The Paraguayans were very impressed by how well they were received into homes and churches in the area around the university.

The desire to do more for their communities has been translated into action by many of the program participants. Several of the nurses in conjunction with help from Peace Corps volunteers have set up free short-term courses in health care for lay health care providers. In October 1988 the nurses from the Hospital Regional in Coronel Oviedo gave a week-long course for twelve rural health post workers, in November 1989 the clinic in Caaguazú did the same for fifteen, and another course is planned in August 1990 in Caaguazú. Another one of the nurses from Villarrica has set up a school for nurses' aides. Yet another has organized a twelve-school vaccination program in her area.

Rural Sanitation Program

This month-long program for rural Paraguayan sanitation inspectors who work for SENASA, the Paraguayan National Environmental Health Service, was held at North Carolina Central University (NCCU) in Durham, North Carolina, from May 20 to June 16, 1989. Once again, as for the 1987 Rural Health Program, Ms. Mary Hawkins of NCCU's Health Education Department did an excellent job of directing the program.

There were eleven participants plus an American Peace Corps volunteer from Paraguay who accompanied the group. As with the 1987 program, those chosen were selected with help from PCV counterparts. The sanitation inspectors attended five hours of classes daily and received both practical and theoretical information. All instruction was given in Spanish. Topics covered included community health education techniques, oral rehydration therapy, water quality testing, sanitary disposal of human and solid wastes, water pump functioning, and the use of audio visuals in educational campaigns. The group also viewed latrine construction and well drilling.

The Paraguayans were housed in an NCCU dormitory and ate all meals in the university cafeteria with other American students. They were able to use all university facilities including the library and the swimming pool.

Additionally, there were many field trips and extracurricular activities to both complement the in-class instruction and to introduce participants to the culture of the U.S. These included visits to the State House in Raleigh (where the group was announced on the floor of the House and given a standing ovation), a history museum, Operation Raleigh, a senior citizen resource fair, the University of North Carolina, Duke University, the Durham Health Department, a water treatment plant, a sewage treatment plant, a sausage factory, a dairy farm, the state zoo, IBM in the Research Park, a river park, a baseball game, an international street fair, a health walk, New York, Washington, and invitations to several homes for dinner and to several church services.

Results of the post-program evaluation showed that the participants found the program to be excellent in most aspects and good in the remaining areas. Ten of the eleven participants said that they thought the program should have been a month longer. The quality of the program director and of the instructors were mentioned as the best aspects of the program.

In June 1990, a year after the program ended, all eleven participants are back at their jobs as sanitation inspectors/supervisors with SENASA, the Paraguayan National Environmental Health Service. Over one third of the group has been promoted since their U.S. training. Two sanitation supervisors are now each in charge of twenty rural communities.

The sanitation workers stated that their U.S. training had given them more confidence in explaining correct sanitary practices to the community. They noted that the participatory educational techniques they had learned in the U.S. made for better communication between them and their audience and also encouraged people in the community to make their own decisions. Several program participants also remarked on how their planning and organizational skills had been enhanced by their training in the U.S., as well as their ability to make their own audio-visual materials. One sanitation inspector said that he now was spending more time teaching instead of just collecting money for water hook-ups, as he had been doing before his U.S. training.

The participants were very impressed by the cleanliness that they saw in the U.S. and by recycling efforts for numerous substances. They were also amazed by the North American spirit of technological innovation. They commented that it would take some time before these things could be integrated into Paraguay.

As a result of their contact with North Americans, the Paraguayan sanitation workers said they now felt much more sympathetic toward the Peace Corps volunteers in Paraguay. Many workers have Peace Corps volunteers as counterparts, and they work together on community projects. Because of their broad sanitation/health training in the U.S., many of the sanitation workers are now collaborating more with nurses and clinics in their area. In fact, many of the SENASA offices of the participants that I visited are now located in hospitals and clinics, whereas before they were on their own.

FINAL ASSESSMENT AND RECOMMENDATIONS

The training accomplished under the USAID/Paraguay-LASPAU contracts has been rated as good to excellent by participants (in end-of-program and post-program written and oral evaluations), by LASPAU staff (determined by on-site training visits in the U.S. and by post-program visits to home institutions in Paraguay), and by USAID/Paraguay personnel (based on post-program contact with participants and their home institutions). Training to date has fulfilled most of the categories in the Country Training Plan and has exceeded numbers planned in many areas. Comments on this project and recommendations for future training programs will be presented in three sections: 1) value of training, 2) suggestions for U.S. institutions, and 3) suggestions for in-country institutions.

Value of Training

In evaluating the success of training under Paraguay #3, we have looked at the quality of the program in the U.S. and whether it met the previously agreed upon goals, and at the participants' satisfaction with the program as well. The ultimate measure of success, however, has been the value of the training once participants have returned to Paraguay. Information on participants in long- or short-term individual programs has been collected to the extent that we have determined that the vast majority of those trained under AID-LASPAU programs have returned to work at their home institutions to use their newly-acquired skills to support the development of those institutions. Information on short-term group participants includes one- to three-year post-program evaluations of the value of their training.

As mentioned above, in the sections on short-term group training, some of the most valuable aspects of the U.S. programs have not been the facts learned, but rather the process of learning and methodology of educating that participants were exposed to in the U.S. Also, the opportunity to observe firsthand how a nation like the U.S. has developed humanly, scientifically, and technologically made a great impression on the Paraguayans. It motivated them to think more globally, while at the same time encouraging them to strive to prepare their countrymen for participation in an increasingly complex world.

The math and science teachers from the Instituto Superior de Educación, the Instituto de Ciencias Básicas, and the Escuela Agronómica Salesiana 'Carlos Pfannl,' not only learned computer literacy skills and new lab techniques which they are adapting for use in their home institutions. More importantly still, they learned how to present traditional math and science materials so that

students will better understand them and become more motivated to want to learn more.

The teachers of English as a foreign language received much information, theoretical as well practical, on what to teach their students. The most valuable part of their training, however, according to most teachers during a post-program evaluation, was how to transfer that knowledge from teacher to student. Since the first TEFL program, the binational center's English program has been completely revamped, and new books, revised teaching methodology, and more communicatively-oriented tests have been instituted. Also, according to the binational center's academic director, all U.S. program participants since their return have given workshops to their colleagues on certain aspects of English teaching, so as to share their knowledge with the many teachers who were not able to attend the U.S. training.

Peace Corps volunteers in health education report that many of the rural health workers, who returned to Paraguay after only a month-long program in the U.S., were changed forever as educators. They have since, for the most part, replaced traditional community health-education methods whereby a health worker read a prepared lecture to the assembled public. Now, thanks to the valuable skills of participatory health education that they learned in their U.S. program, they encourage plenty of interaction and discussion from their audience, so that the public feels much more invested in whatever decisions are taken. Incidentally, since returning to Paraguay in 1987, several nurses have organized a yearly week-long seminar on health education methodology for their Paraguayan coworkers.

In summary, the USAID/Paraguay-LASPAU training projects have been extremely valuable from the point of view of participants as well as of both agencies involved. The value of training has been in the skills learned, but even more importantly in the new approaches to the teaching-learning process. An equally valuable part of the training was the chance to experience the 'American way of life' and to be challenged by it to strive for higher goals in home-country development.

Suggestions for U.S. Institutions

In the case of all six group-training programs (two each of basic science and math; teaching English as a foreign language; and rural health/sanitation), the same university was used for the second group in each program as for the first. This gave both LASPAU and the training institution a chance to improve upon the initial models. Thus, most suggestions for improvement of either academic or social/cultural aspects were incorporated into planning for the second phase. These suggestions included items such as: fewer hours of English and more of subject matter, weekly meetings of participants with the program director to discuss concerns, more careful selection of homestay families, more time allowed for the final student reports, more individualized science teaching, menu changes in the hotel restaurant, increased per diem allowance, permission for the Peace Corps volunteer with the sanitation group to drive the group minibus, a greater chance for the TEFL participants to improve their own English, and more material on their U.S. institutions and programs for pre-departure orientations in Paraguay.

Suggestions for In-country Institutions

Most Paraguayan institutions were very pleased to have been selected for development training and fully supported their teachers/employees. This support included, in most cases, continuing their salaries and holding their jobs for them until they returned from the U.S. Several of the participants have since been promoted within their institutions.

Some of the institutions were more receptive than others in letting the returned trainees share or use their newly-acquired skills. Teachers from the binational center gave workshops for their colleagues and implemented significant changes in the curriculum, whereas teachers from the Instituto Superior de Educación have been unable to implement their computer-based teaching units due to the total absence of computers at that institution.

Two areas that could be improved when planning other programs are pre-departure orientation and explanations of exact training needs. Many participants commented on how little they knew about what was awaiting them in the U.S. before they arrived and how they wished they had known more. Participants should be encouraged to use the resources of the binational center and the USAID office, and in turn perhaps these entities could provide a more formal pre-departure orientation. Also, in-country institutions need to send more detailed written information regarding training needs, especially if there are specific areas, not readily apparent to USAID-LASPAU personnel in which training is desired. In this way, the U.S. institution can plan a program better suited to the needs of the home-country institution.

To ensure optimal implementation of newly-acquired material and ideas by the Paraguayans once back in their home institutions, it is important the USAID-LASPAU conduct regular, perhaps biannual, evaluations of them and let their directors know that this on-going evaluation is a part of the total institutional development program. Especially for long-term participants, coordination by USAID/Paraguay between the home institution and the returning scholar is of extreme importance. Both parties need the other, but both also need help in defining the relationship.

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APPENDIX A

PARTICIPANTS IN PARAGUAY #1

<u>Name, address, phone</u>	<u>Parag. Instit.</u>	<u>U.S. inst.</u>	<u>Year</u>	<u>Field</u>	<u>Degree</u>
Eugenio Baez Dr. López Moreira 681 Asunción Tel. 661818	Instituto de Investigaciones en Ciencia de la Salud (UNA)	SUNY-Buffalo	1983	infect. diseases	ND
Enrique Cegla Cruz del Defensor 1573 Asunción Tel. 661249	Hospital Neuro- psiquiátrico (UNA)	U. Kansas	1983	psychiat.	ND
Antonio Figueredo Sucre 2170 Asunción Tel. 660021	Instituto de Investigaciones de Ciencias de la Salud (UNA)	U. Missouri	1983	biochemis.	M
Raul Gauto Dr. Morquio 929 Asunción Tel. 25823	Facultad de Agronomía/ forestales (UNA)	Virginia Polytechnic Institute	1983	forest eco.	M
Celso Giménez Av. Dr. Montero 396 Asunción Tel.	Secretaría Técnica de Planificación	Kansas State Univ.	1983	agric. eco.	M
Blas Oddone SEAG/MAG Mcal Estigarribia km 10 San Lorenzo Tel.	Servicio de Extensión Agrí- cola Ganadera (MAG)	Texas A & M	1983	animal sc.	M
Ricardo Pedretti Gelly 385 (6a) c/Alberdi Asunción Tel.	Instituto Agro- nómico Nacional (MAG)	Oregon State	1983	plant breed and genetics	D
Aristides Raidán 3a Proyectada c/Dr. Pino Caacupé Tel.	Ministerio de Agricultura y Ganadería	Purdue U.	1983	agric. eco.	M

APPENDIX B

PARTICIPANTS IN PARAGUAY #3

<u>Name, address, phone</u>	<u>Parag. instit.</u>	<u>U.S. inst.</u>	<u>Year</u>	<u>Field</u>	<u>Degree</u>
Ariel Cegla Teniente Fariña 1398 Asunción Tel. 201411	Ministerio de Agricultura y Ganadería	Michigan State U.	1984	agric. eco.	M
Ruben Rolón 2 de Febrero 932 Lambaré Tel. h: 31219, o: 662871	Ministerio de Agricultura y Ganadería	U. Wyoming	1984	agric. eco.	M
Mario Insaurrealde Wenc. López c/8 de junio San Lorenzo Tel. 222687	Fac de Ciencias Veterinarias (UNA)	Mississippi State U.	1985	fish produc.	D (1991)

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APPENDIX C

PARTICIPANTS IN PARAGUAY #3

Long-term participants

<u>Name, address, phone</u>	<u>Parag. inst.</u>	<u>U.S. inst.</u>	<u>Year</u>	<u>Field</u>	<u>Degree</u>
Juan José Aveiro R.I. 6 Boquerón 1331 Asunción Tel. 601718	Fac. de Ciencias Vet. (UNA)	U. Missouri	1989	animal reproduction	M
Gladys Benegas Tte. Rolón Viera 1144 Asunción Tel. 27895	U. Católica	U. Pittsburgh	1989	econ. & soc. development	D
Antonio Brítez Herrera 195 y Yegros Asunción Tel. 95581, 212720	U. Católica		1990	business	MBA (1992)
César Cardoso Gral. Aquino 829 Asunción 25088, 90001	U. Católica		1990	business	MBA (1992)
László Farkas Cusmanich 882 c/D. Nacl Asunción Tel. 26215	U. Católica	U. Missouri	1987	civil eng./ constr. eng.	M
Alejandro García de Z. Teniente Rivas 1496 Asunción Tel. 291201	Inst. Nacional de Tecnología y Normalización	U. Missouri	1986	food science	M
Sergio Gómez Av. Artigas No. 2050 Asunción Tel. 292383	Fac de Ciencias y Tecnología (U. Católica)	U. Dayton	1986	computer sc.	M
Beltran Macchi Dr. Manuel Domínguez 2991 Asunción Tel. 202359	U. Católica	U. Houston	1988	business	D*
Carmen Ortiz Dr. Morquio 575 Asunción Tel. 25210	U. Católica		1990	business	MBA (1992)

María de la Paz Peña Héctor Palacios 1545 Asunción Tel. 291155	Centro Cultural Paraguayo-Americano	U. Kansas	1986	Educ/TESOL	M
Luis Ramírez Bertoni 1842 Asunción Tel. 80349, 91885	U. Católica	Vanderbilt	1986	economics	M
Vidal Rivelli Independencia 128 Villarrica Tel. (0541-2595)	Escuela Agron. Salesiana 'Carlos Pfannl'	Louisiana State U.	1987	plant path	M
Guillermo Sosa Rivera 837 Asunción Tel. 27101 (As of 1/1/90 Mr. Sosa was the economic attache for the Paraguayan Embassy in Brasilia.)	Secretaría Técnica de Planificación	Tufts U.	1987	econ. dev.	M
Roberto Stewart 1230 Lugano Asunción Tel. 446014	Fac. de Ingen. Agron. (UNA)	Cal. State U., Chico	1988	agronomy	M
Eduardo Vuyk Tte. Rivas 1218 Asunción Tel. 292410	Secretaría Técnica de Planificación	Manhattan College	1986	chem. eng.	M

* participant returned home before finishing program

Short-term individuals

Carlos Amarilla Calle Caazapá 561 Asunción Tel. h:554191, o:445759	U. Católica	U. Toledo	1988	English (business)	ND
Ruth Brítez Lavin Jardine Dr. H-31 Manhattan, KS 66502 Tel. (913) 776-0477	Fénix, S.A. - Martel (export)	Kansas State U.	1989	textile marketing	ND

Alvaro Caballero Mayor Casianoff 651 Asunción Tel. h:604362, o:200856	Paraguay-Kansas Committee	Volunteers in Technical Assistance	1988	information resource mgmt	ND
Mario Centurión Azara 197-3o Asunción Tel. 45003, 90451	U. Católica	U. Toledo	1988	English (business)	ND
Roberto Céspedes Cap. Figari 571 Asunción Tel. h:23431, o:443734	Centro Parag. de Estudios Sociológicos	U.S. Dept. of Labor	1989	computer packages for soc. scientists	ND
Vicente Fruet	U. Católica	Boston area universities	1988	business/ case method	ND
Flaviano Garcete Av.Grl Genes y A. San M. Asunción Tel. h:600819, o:208076	Dirección General de Aeronáutica Civil	Federal Aviation Agency	1988	telecommun.	ND
Walter Gill Morlis Calle 92 #4038 Asunción Tel. 61966	Instituto de Ciencias Básicas (UNA)	Auburn U.	1986	aquaculture	ND
Carlos Gorostiaga Acá Carayá 230 Asunción Tel. 200346	Banco Central del Paraguay	U.S. Dept. of Labor	1989	construct. of price indexes	ND
María T. Lloret de Fdez Boquerón 559 Asunción Tel. 24088	Inst. Paraguayo de Estudios Geo- políticos e Intern.	Indiana U.	1987	internat. environ. law	ND
Ana Mannarini Av. R. de Francia 135 Asunción Tel. 41485	Instituto Super. de Lenguas	TESOL Conference	1987	TEFL	ND
Cristina de Ortiz	U. Católica	Boston area universities	1988	business/ case method	ND
César Pose Calle 24 de mayo casi Av. Gral Santos Asunción Tel. 93754(h) 497260(o)	Ministerio de Hacienda Direc. de impuesto a la renta	Internal Revenue Serv.	1989	internatl. tax adminis.	ND

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Short-term groups

Basic Science and Math Group 1987

<u>Name, address, phone</u>	<u>Parag. inst.</u>	<u>U.S. inst.</u>	<u>Year</u>	<u>Field</u>	<u>Degree</u>
Ada Aguilera de Aguilar Boquerón 321 Fdo de la Mora, Asunción Tel. 500356	Instituto Superior de Educación (ISE)	Miami-Dade Comm. College	1987	math	ND
Teresita Alcaraz Juan del Castillo 593 Asunción Tel. 554186	ISE	"	"	"	"
Alejandrina Arce de Silvero Asunción 806 Fdo de la Mora, Asunción Tel. 501857	ISE	"	"	"	"
Ursinia Cattebeke de Bellino Fray Luis de León y Luis Morales Asunción Tel. 204055	ISE	"	"	science	"
Fermín Elli Av. Ingavi c/Mcal. López Zona Norte, Fdo de la Mora Asunción Tel. 504175	ISE	"	"	"	"
Amelia Mussi de Duarte Av. Rep. de Argentina 186 Asunción Tel. 550757	ISE	"	"	math	"
Gladis Nunes Soldado Ovelar y S. José Zona Sur, Fdo de la Mora Asunción Tel. 501283	ISE	"	"	"	"
Dionisio Ortega Tte. Rivarola 2824 Fdo de la Mora, Asunción Tel. (vecino) 504535	ISE	"	"	science	"
Ana María Villa de Benítez Independencia Nacional 2013 Asunción Tel. 71951	ISE	"	"	math	"

Basic Science and Math Group 1988

<u>Name, address, phone</u>	<u>Parag. inst.</u>	<u>U.S. inst.</u>	<u>Year</u>	<u>Field</u>	<u>Degree</u>
Inés Alonso de Rivas Lomas Valentinas 1685 Asunción Tel. 441450(Of. am)	Instituto Superior de Educacion (ISE)	Miami-Dade CC	1988	chemis/ physics	ND
Gustavo Bañuelos Mcal. Estigarribia 872 Itá Tel. 024383	Instituto de Ciencias Básicas (ICB)	"	"	math	ND
Nancy Desvars Sta Cruz de la Sierra 1530 Asunción Tel. 605390	ICB	"	"	biology	ND
Elva Luz González de García Av. Santísimo Sacramento 2507 Asunción Tel. 290751	ISE	"	"	biology	ND
Ada Ledesma San Pedro casi Ytororo Fernando de la Mora, Asunción Tel. 501212	ISE	"	"	math	ND
Eva Angélica Leiva Brasilia 1790 y del Escudo Asunción Tel. o: 501517	ICB	"	"	math	ND
Estela Muñoz de Cárdenas Ingavi 2069 c/Casanello Barrio San Vicente, Asunción Tel. 32099(parents), 37000, 448214 (M.de Ed.)	ISE	"	"	math	ND
César Ramón Quintana Guido Spano 2729 c/Denis Roa Asunción Tel. O: 503011, 602345 (tío)	ISE	"	"	geology	ND
Mirtha Fátima Robadín Ruta 7 Km. 140 Coronel Oviedo Tel. o: 0521-2212	Instituto Agronómico Salesiano 'Carlos Pfannl'	"	"	biology	ND
Raquel Torres 23 Proyectadas y Rojas Silva 1221 Asunción Tel. O: 501517	ICB	"	"	math	ND

Teaching English as a Foreign Language Methodology Group 1987

<u>Name, address, phone</u>	<u>Parag. inst.</u>	<u>U.S. inst.</u>	<u>Year</u>	<u>Field</u>	<u>Degree</u>
María Gladys Carreras Dr. Weiss 245 c/Andrade Asunción Tel. 662373	Centro Cult. Paraguayo Americano (CCPA)	San Diego State Univ.	1987	TEFL	ND
Alicia Chekerdemián Iturbe 870 Asunción Tel. 441861	CCPA	"	"	"	ND
Ma José Fiorio de Chaves Legión Extranjera 604 Asunción Tel. 63157	Centro Anglo Paraguayo (CAP)	"	"	"	ND
Nestor Melgarejo Díaz de Solís 1032 Asunción Tel. 80167	CCPA	"	"	"	ND
Ma. Stella Netto San Francisco 365 Asunción Tel. 22738	Fisk Inst.	"	"	"	ND
Marta Ortiz Avda. Artigas 736 Asunción Tel. 24352	Fisk Inst.	"	"	"	ND
Nélida Ovelar Costa Rica 1143 c/Paí Pérez Asunción Tel. 204151	CCPA	"	"	"	ND
Jesus Pérez Yegros 1160 Asunción Tel. h: 444370, o: 24772	CCPA	"	"	"	ND
Ma. Crisitina Rickmann Castelar 656 c/Venezuela Asunción Tel. 290714	CAP	"	"	"	ND
María Inés Riveros Yegros 1160 Asunción Tel. 44370	CCPA	"	"	"	ND

Silvia Zanotti Dr. Migone 1232 Asunción Tel. 600406	CCPA	"	"	"	ND
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Rural Health Group 1987

<u>Name, address, phone</u>	<u>Parag. inst.</u>	<u>U.S. inst.</u>	<u>Year</u>	<u>Field</u>	<u>Degree</u>
Gervacia Allende General Brúguez, casa 2120 Barrio 12 de junio Coronel Oviedo Tel. 2273 (Hospital Regional)	Ministerio de Salud	North Carolina Central U. (NCCU)	1987	rural health	ND
Mariana de Jesús Benítez Teniente Herrera 867 Barrio Sta. Teresita, Caazapá Tel. 223 (Centro de Salud)	"	"	"	"	ND
Andrés Coronel Puesto de Salud Repatriación Chacoré Caaguazú Tel. 4 (Cen. de Salud, Repatriación)	"	"	"	"	ND
Leopoldina Delgado Robert McNamara Repatriación Caaguazú Tel. 2358 (C de S, Caaguazú)	"	"	"	"	ND
Antonia Fernández Barrio Don Dosco Villarrica Tel. 215 (Cen. de Salud, Independencia/Sta Cecilia)	"	"	"	"	ND
Irma Fleitas de Quiñónez Independencia Nacional 129 Coronel Oviedo Tel. h: 0521-2219, o: 0521-2167 (Hosp. Reg.)	"	"	"	"	ND
Aurelia Neomicia Flores Barrio San Luis Dr. Cecilio Báez (Coronel Oviedo) Tel. llamar a Antelco (Puesto de Salud, Dr. C. Báez)	"	"	"	"	ND

Elcida González Calle 3 de noviembre, Brasil Cué (Caaguazú) Tel.	"	"	"	"	ND
María Rosa González Puesto de Salud Calle 6000 Defensores (San Estanislao) Tel. (Cen. de Salud, San Estanislao for her Puesto de Salud)	"	"	"	"	ND
Domitila Irala Dr. Eulogio Estigarribia 121 Coronel Oviedo Tel. h: 2679 (llamar a la Sra. Obdulia Irala de Noguera), o: 2167	"	"	"	"	ND
María Elena Martínez Carlos Antonio López 1870 Caaguazú Tel. h: 0522-2972, o: 0522-2358 (Centro de Salud)	"	"	"	"	ND
Valentín Martínez Calle Asunción Barrio San Pedro San Estanislao Tel. (Centro de Salud, San Estanislao)	"	"	"	"	ND
Sebastiana Muñoz Manuel Domínguez-Palma, casa 380 Barrio San Roque, Ytauguá Tel. H: 2776, o: 2386 (Cen. de Salud, Villarrica)	"	"	"	"	ND
Julia Odila Paiva Col. Santa Rosa (Yhu), Caaguazú Tel.	"	"	"	"	ND
Isabel Vásquez de Gavilán Coronel Bogado Barrio Sta. Librada Villarrica Tel. 2386 (Centro de Salud, V.)	"	"	"	"	ND

Rural Sanitation Group 1989

<u>Name, address, phone</u>	<u>Parag. inst.</u>	<u>U.S. inst.</u>	<u>Year</u>	<u>Field</u>	<u>Degree</u>
Pastor Alfonso Cerro Corá y EEUU Villa Hayes Tel. h: 026213, o: 444182 (SENASA)	Servicio Nac. de Saneamiento Ambiental	North Carolina Central Univ.	1989	rural sanitation	ND
Cayo Gaona Sta. Cecilia (Independencia) Tel. 041518-215 (Centro de Salud de Independencia)	"	"	"	"	ND
Juan Giacobbi Teniente Dacak San José de los Arroyos Tel. 59 (San José)	"	"	"	"	ND
Gregorio Godoy Cedro y Encarnación Villeta Tel. h: 550117, o: 444182	"	"	"	"	ND
Justo González Flecha Spaini y Gral. Díaz Piribebuy Tel. h: 0515-405, o: 0511-323 (Caacupé)	"	"	"	"	ND
Cándido León Defensores del Chaco 60 Villa 4 de mayo, Luque Tel. o: 444-182	"	"	"	"	ND
Cirilo Riquelme Calle San Miguel, Barrio Sta Isabel Caaguazú Tel. 0522-2528/2393	"	"	"	"	ND
Basílica Romero Gral. Genes Guarambaré (lives in San Antonio) Tel. 0293-203	"	"	"	"	ND
Luis Ramón Santander 14 de mayo y Agustina Miranda 63 La Colmena (Paraguarí) Tel. 34 (Centro de Salud, La Colmena)	"	"	"	"	ND
Francisco Valdovino Av. Mcal. López y Colón San Estanislao Tel. 043-301 (SENASA Santani)	"	"	"	"	ND

César Vera
Gral. M. Jiménez 120
Ñemby
Tel. 0223333 (C de S)

" " " " ND