

September 11, 1991

MEMORANDUM

TO: Sue Bugg, LAC/DR/PSS
FROM: *M. Arnold*
Marilyn Arnold, LAC/DR/EHR
SUBJECT: Project Assistance Completion Report, Regional
Statistics Training Center Project (598-0606)
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The Regional Statistics Training Center Project was authorized on December 1, 1984 for \$1,000,000, with the U.S. Bureau of Census. The Project Assistance Completion Date was September 30, 1990. All funds have been obligated. Attached you will find the End of Project Report prepared by BUCEN and cleared by myself. It shows that this project was relatively successful. This project was a Congressional earmark - and the bureau would not want to fund a project of this nature again.

The ESAYTEC training program has generally accomplished the objectives of the 5-year AID grant. A capability to provide applied training in Spanish in statistics and computer processing, which did not previously exist, has been established. A large number of persons have been trained directly by ESAYTEC and indirectly through its graduates. While it does provide valuable training in statistics, data processing and data analysis, it would not be one of the LAC Bureau's priorities.

There have been two main barriers to greater participation in ESAYTEC training by the countries of Latin America: the relatively high cost of U.S. based courses and their duration. Many institutions cannot spare key technical staff to attend the 7-month modular course. Very few countries have availed themselves of shorter term options involving only one or two of the three modules comprising the course.

At the end of the project, in order to publicize the Statistics Center, we sent out informational materials to all A.I.D. LAC Missions and hopefully if funding is available and a qualified candidate can be found, they can send someone for this very specific type training by preparing a funded PIO/P and processing it through OIT channels.

Attachment: a/s

END-OF-PROJECT REPORT

***REGIONAL STATISTICS TRAINING CENTER PROJECT
(Project No. 598-0636)***

***Submitted to LAC/DR/EHR by the
International Statistical Programs Center
U.S. Bureau of the Census
January 28, 1991***

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I. Project Background Data

Project Title: Regional Statistics Training Center

Project Number: 598-0636

A.I.D. Project Manager: Marilyn Arnold

Date of Authorization: 12/1/84

Obligation of Funds:	12/1/84	54,000
	9/26/85	347,000
	5/27/86	100,000
	3/30/87	245,000
	8/31/88	254,000

PACD: 9/30/90

Implementation Agency: U.S. Bureau of the Census

II. Project Purpose

The Census Bureau signed a Participants Agency Services Agreement (PASA) with A.I.D. on September 17, 1985 to implement this project. Following is the statement of the project's purpose from the scope of work of the PASA.

To contribute to improvements in the quality, timeliness, and relevance of statistical data in the LAC countries by establishing a training center at the Bureau of the Census to provide applied training in statistics, data processing, and data analysis. The training content will be tailored to the needs of the Spanish-speaking countries and Brazil. The language of instruction will be Spanish.

The specific purposes of the project are as follows: (1) to establish a capability to provide strongly applied training which incorporates the use of the latest computer technologies and statistical methods; (2) to increase the number of trained personnel in LAC public and private sector organizations that produce and use statistical data; and (3) to strengthen the capacity of LAC institutions to provide this type of training.

III. Overview of Project Implementation

The Census Bureau's International Statistical Programs Center (ISPC) was given the responsibility for carrying out the project. Initial developmental work, including curriculum design, preparation of training materials, and program promotion, took place from mid-1985 to mid-1986. On August 19, 1986, the Escuela de Estadística Aplicada y Técnicas de Computación (School for Applied Statistics and Data Processing Technology) was officially inaugurated at a ceremony at the Census Bureau. The inauguration coincided with the opening of the first training activity, a 5-week workshop on Microcomputer Applications for Statistical Organizations. Seventeen participants from 10 countries attended.

In the fall of 1986, ISPC created a new organizational unit to operate the ESAYTEC program, the Latin American Training Branch. The branch included two full-time professionals and three full-time support staff. This core staff was augmented by professionals from the technical assistance area of ISPC and from throughout the Census Bureau. Much of the curriculum development work and instruction was performed by this part-time staff. By the end of the project in September of 1990, the full-time staff had grown to only four professionals and three support personnel.

The ESAYTEC program developed and implemented training activities at the Census Bureau's headquarters in Washington and in various countries of Latin America. The principal training activity, the 7-month modular course, was conducted in Washington. Short-term seminar and workshops lasting from 1 to 4 weeks were done overseas.

The principal audience for ESAYTEC training has been the staff of IAC public sector organizations responsible for producing and using statistical data. Most of these have come from the national statistical offices.

The project developed three 7-month courses, a 3-month course, and four seminars and workshops. Fifteen separate training events were conducted during the life of the project. A total of 294 persons were trained. About half attended the modular course in Washington and the other half participated in workshops and seminars. All the training conducted and all the training materials developed are in the Spanish language.

Several important developments in FY 1990, the last year of the project, will have considerable impact upon the future of ESAYTEC. First, an agreement was developed between the Census Bureau and its counterpart in Mexico, the Instituto Nacional de Estadística, Geografía e Informática, to conduct the modular

course jointly. Beginning in 1991, the last 2 months of the 7-month program will take place in Mexico. The Mexicans also will play a role in overall curriculum decisions and will provide some instructors for the training conducted in Washington.

Another important development in FY 1990 was the successful implementation of a multiplier effect through a separate project funded by USAID/Guatemala. This project entailed a three-phase training effort which included in-country follow up by ESAYTEC staff with graduates of the U.S.-based training. This provided a tested model that can be replicated in other countries in the future to enhance the cost effectiveness of ESAYTEC training.

IV. Project Accomplishments

The most important accomplishment of the project was the creation of a training program, with the associated curricula and training materials, that is capable of meeting the needs of the LAC region for applied Spanish-language training in statistics and data processing. The program exists and, as mentioned earlier, will be conducted jointly with Mexico's statistical office beginning in 1991. The investment represented by the AID funded expended during the 5-year project will continue to yield benefits far into the future.

Specific outputs during the life of the project are given below. Actual accomplishments are compared with the targets set in the original Project Paper, with subsequent modifications.

<u>Description of Output</u>	<u>Planned</u>	<u>Accomplished</u>	<u>Percentage Accomplished</u>
Training Activities Developed:			
Workshops and Seminars	5	4	80%
7-month Courses	3	3	100%
3-month Courses	1	1	100%
Training Activities Implemented:			
Workshops and Seminars	16	6	37%
7-month Courses	8	8	100%
3-month Courses	1	1	100%
Participants Trained:			
	M/F	M/F	M/F
Short Term	198 97	125 29	63% 31%
Long Term	95 47	99 41	104% 87%

As indicated in the above table, most project targets were met. However, the original assumptions used during the design of the project were not borne out with respect to short-term training. The number of workshops and seminars planned was not realized due to the difficulty of obtaining funding. Washington-based workshops advertised for the summer of 1987 and 1988 had to be cancelled due to the lack of funded participants. Arranging funding for overseas workshops proved very difficult and time-consuming from the standpoint of management and administration. Conducting short-term training on an ad hoc basis proved not to be feasible. The experience of the first several years of the project showed that conducting workshops and seminars was feasible only if funded as part of a larger, multi-year project or when funded by a country Mission as a buy-in to the existing project PASA.

Another view of project outputs is given by the first graphic appearing below. This clearly shows the rate of growth of ESAYTEC in terms of the amount of training provided.

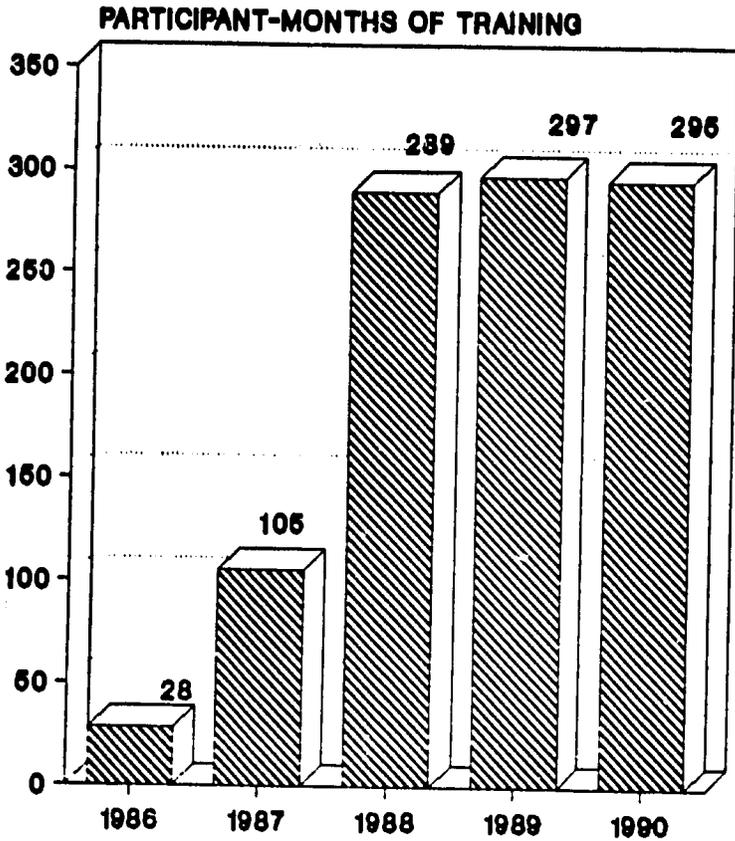
V. Selection and Funding of Participants

The Census Bureau does not have funding to operate this program. Therefore, in accordance with the financial plan established in the Project Paper, a major goal was to generate enough outside funding to cover all operating costs by the end of the 5-year project. Project funds were to be used for development and start-up costs. Tuition charged for courses was to cover instructional costs to the extent possible. Sponsors were needed to provide fellowships to enable participants to attend the modular courses. The fellowships covered tuition, other training costs, living allowances while in the U.S., and, in some cases, international airfare. In the case of workshops conducted overseas, a source of funding was required to cover the salaries and travel costs of Census Bureau instructors.

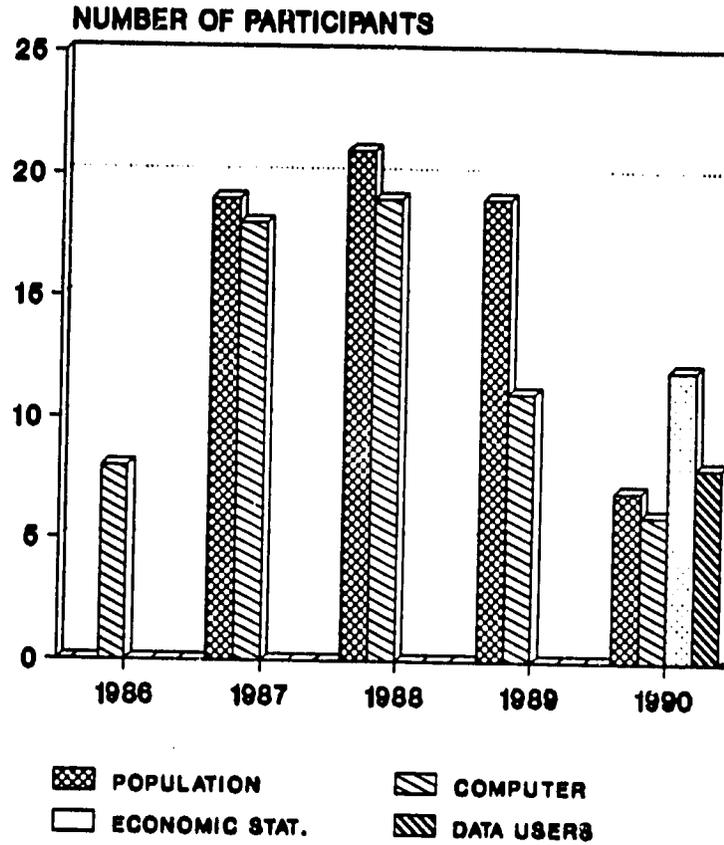
In view of this situation, a significant portion of staff time and effort was devoted to promoting the program among potential sponsors and seeking funding sources. Census Bureau staff made a round of promotional visits to the region each year during the first three years of the project. These visits coincided with the distribution of the information booklet for the next year's training activities.

The nomination and selection of candidates for training was largely the responsibility of the sponsoring agency and the candidate's employer. The ESAYTEC information booklet established minimum requirements with respect to education and work experience. Beginning in 1988, a formal application form was introduced for candidates for the modular courses.

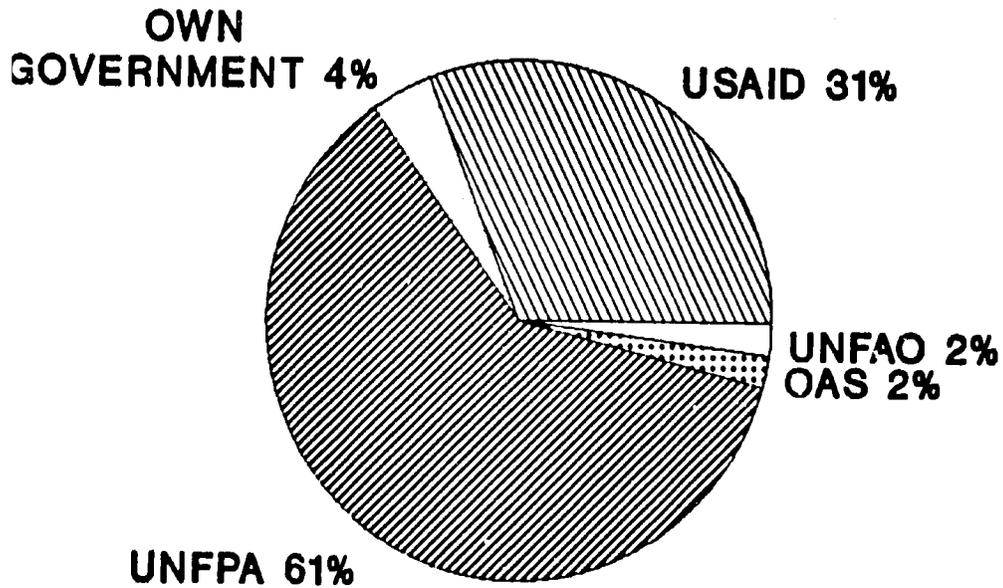
PARTICIPANT-MONTHS OF TRAINING BY FISCAL YEAR, ALL TRAINING ACTIVITIES



COMPOSITION OF ENROLLMENT BY FISCAL YEAR



**SOURCE OF FELLOWSHIPS
FY 1986 - FY 1990**



The graphic above shows the sources of fellowship funding for the modular courses from FY 1986 through FY 1990. The workshops conducted in Guatemala and Costa Rica were funded by USAID through amendments to the project PASA. The other four workshops were funded by a combination of donors, including the host country, USAID's, and the UNFPA.

A series of graphics depicting the demographic characteristics of participants who attended the modular courses and the 3-month Data User Services course appears in the next page. The country of origin of participants is given in a table on the subsequent page. The institutional affiliation of the participants is also shown.

VI. Course Development

Course development took longer than expected and required more staff time than had been anticipated during project design. Development of the 7-month courses also was slowed somewhat by a delay in the obligation of project funds in FY 1988.

The development of the curriculum and training materials for each area of specialization proceeded as planned. A needs analysis preceded the preparation of instructional objectives. Training materials used in the Census Bureau's English-language program were reviewed and incorporated as appropriate, after being translated into Spanish. Course objectives and materials were modified as necessary after the first offering.

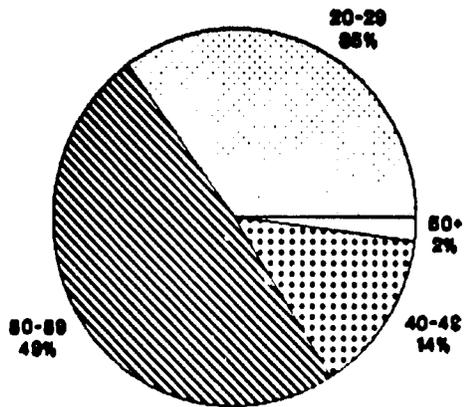
VII. Course Implementation

ESAYTEC used the applied training model developed by the Census Bureau's English-language program. This involves the presentation of as little theory as possible, with emphasis on practical applications to real-life problems that the trainees face in their countries. Courses make extensive use of case studies, group exercises, and laboratory exercises. The curriculum of courses is comprehensive in order to give participants the "big picture" of statistical operations.

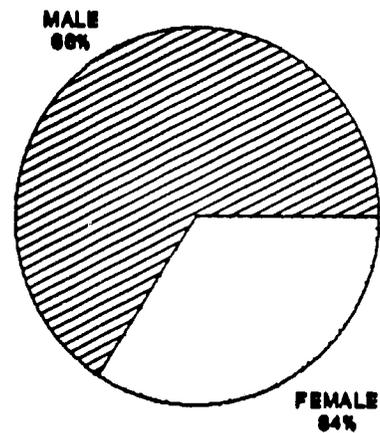
The centerpiece of the English-language training program is a real household sample survey planned and conducted by the participants under the guidance of the instructional staff. It was not feasible to undertake this type of activity for ESAYTEC due to the lack of a population of Spanish-speaking respondents. However, it was possible to replicate much of this exercise through a survey simulation exercise. It was developed over the first three years of the project. Spanish-speaking staff of the Census Bureau serve as survey respondents.

PROFILE OF TRAINEES IN MODULAR COURSES AND DATA USERS SERVICES COURSE FY 1986 -- FY 1990

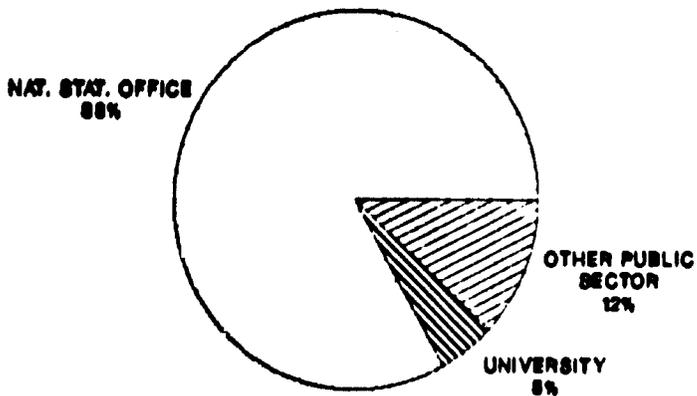
AGE



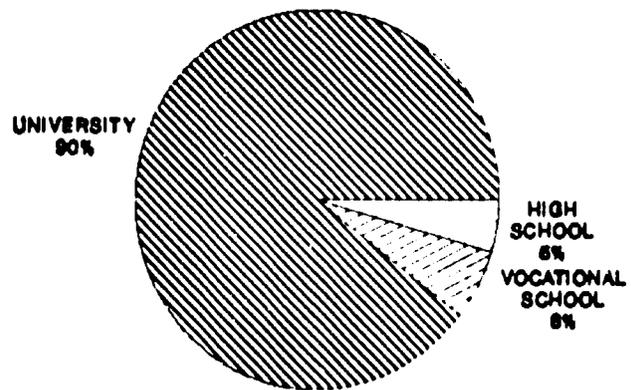
SEX



INSTITUTIONAL AFFILIATION



EDUCATIONAL ATTAINMENT



**MODULAR COURSE ENROLLMENT
BY FISCAL YEAR AND COUNTRY**

COUNTRY	TOTAL FY1986-1990	FISCAL YEAR				
		FY1986	FY1987	FY1988	FY1989	FY1990
Angola	2			2		
Argentina	5		2		3	
Brasil	3			1	2	
Bolivia	9		2	5	1	1
Colombia	5		1	2		2
Costa Rica	8	1	2	3		2
Chile	4			2	2	
Dom. Rep.	13	2	2	3	1	5
Ecuador	8		2	2	3	1
Ec. Guinea	2		1		1	
El Salvador	6		4	2		
Guatemala	24		3		5	16
Haiti	4			3	1	
Honduras	9	3	2	2	2	
Mexico	11		5	3	1	2
Panama	6		1	2	2	1
Paraguay	7	1	3	2	1	
Peru	12		5	4	3	
Sao Tome	1					1
Uruguay	3	1		1		1
Venezuela	6		2	1	2	1
TOTAL	148	8	37	40	30	33

VIII. Quality and Relevance of the Training

Counterparts in the Latin American statistical community have had considerable input into curriculum development and course instruction. Proposed curricula were reviewed by the directors of statistics of the countries in the early stage of the project. At the request of the Census Bureau, the permanent executive committee of the Inter-American Statistical Conference (IASC) agreed to serve as the Consultative Board of ESAYTEC beginning in early 1989. The IASC is a quasi-governmental organization of chief statisticians of the Americas under the aegis of the Organization of American States. The IASC committee conducts an annual review of the ESAYTEC program and course offerings.

In 1990 a Visiting Instructors Program was launched. Distinguished technicians from statistical organizations throughout the region, including graduates of the ESAYTEC modular course, are invited to spend several months at ESAYTEC as instructors. ESAYTEC covers travel costs and the sending institution continues to pay the instructor's salary. Guest instructors to date have come from the Dominican Republic, Argentina, Costa Rica and Mexico.

This program greatly enriches the quality of the training and helps to ensure that it remains relevant to the needs of the countries. It also offers counterpart institutions an opportunity to contribute to the ESAYTEC training program.

IX. Multiplier Effect

A major goal of the project was to provide training that graduates would share with others upon returning home, thus creating a multiplier effect. Considerable effort has been made in the modular courses to motivate participants to train others when they return home. The participants receive training in how to implement change at the Management-Communication Seminar that is part of the modular course. In addition, all participants take a course on the design and delivery of training.

A number of ESAYTEC graduates have shared their new skills and knowledge with their colleagues through formal training sessions and on-the-job training. Graduates from the national statistical office of Paraguay have formed an alumni association which organizes courses and promotes training within the institution.

The most noteworthy instance of the multiplier effect is found in Guatemala. With funding from USAID/Guatemala under the Development Training and Support Project, an in-country training program conducted by ESAYTEC graduates has been established. The

project consisted of three phases taking place from FY 1989 through FY 1991. In the first phase, ESAYTEC staff conducted a 2-week technical training workshop in Guatemala. Workshop attendees were screened for possible future training in the U.S. Training at ESAYTEC constituted the second phase.

The third phase consisted of multiplier training by graduates of the U.S. training after returning to Guatemala. ESAYTEC staff made follow-up visits to Guatemala to assist the graduates in planning, preparing and conducting training courses.

The first wave of nine ESAYTEC graduates trained 98 persons from throughout the Guatemalan statistical system in calendar year 1990. They conducted courses ranging in length from four days to three months. The second group of twelve returned graduates are expected to provide at least as much training in calendar year 1991. A permanent training capability has been established in the national statistical office, which serves as the coordinating unit for all government agencies comprising the statistical system. Therefore, the benefits of ESAYTEC training will continue to be realized far into the future.

X. Program Evaluation

Participants who attend the modular course completed detailed evaluation forms upon completion of each individual course and prepared pre-departure reports with a final evaluation of the training program. The individual course evaluations were keyed and tabulated and the results were reviewed by the instructor and the program director. Modifications were made to the courses as necessary.

The staff conducted overall curriculum evaluations at the end of each 7-month course cycle. These were based on the participants' pre-departure reports and on the results of formal debriefing sessions with participants prior to their departure. Extensive revisions have been made to the curriculum and to course content as a result of these evaluations.

Post-training evaluation has been done on an informal basis by Census Bureau staff visiting countries on other business. No formal follow-up evaluation has been done to date.

XI. Future of ESAYTEC

The ESAYTEC training program has generally accomplished the objectives of the 5-year AID project. A capability to provide applied training in Spanish in statistics and computer processing, which did not previously exist, has been established. A large number of persons have been trained directly by ESAYTEC and indirectly through its graduates.

The biggest problem faced by the program is the lack of sufficient funds to cover operating costs. This funding is supposed to come from sponsoring organizations which provide fellowships. As can be seen from the graphic above, two organizations--the UNFPA and USAID's-- have provided almost all the funding. The number of sources of fellowships must be expanded. Moreover, fellowship funding from AID Missions must be greatly increased. Missions accounted for only 31% of fellowships provided during the first 5 years of the project. When the unusually large number of fellowships provided by the Guatemala project are excluded, the proportion of funding from Missions falls to 22%.

In order to continue to provide training, the ESAYTEC program must reach the point where tuition income covers its operating costs. There is no single solution to this problem. Instead, it will be necessary to simultaneously address different aspects of program cost, format and content in order to attract enough funding to make the program self-sufficient. Some modifications to the program are already in progress and others will have to be implemented in the future. They are discussed briefly below.

Duration and Cost of Training

There have been two main barriers to greater participation in ESAYTEC training by the countries of Latin America: the relatively high cost of U.S. based courses and their duration. Many institutions cannot spare key technical staff to attend the 7-month modular course. Very few countries have availed themselves of shorter term options involving only one or two of the three modules comprising the course. This could be partially due to insufficient publicity concerning the modular nature of these courses.

Recent promotional efforts and informational materials have emphasized the shorter-term training options available. Shorter-term courses are being introduced. The course on data user services was 3 months in duration when first offered in 1990 and will be shortened to 9 weeks the next time it is conducted. Other courses of one to three months duration are under consideration.

Perhaps a more compelling reason to shorten the duration of U.S. based training is to reduce total cost. One option being studied is to shorten the 7-month course to five months beginning in 1992. This would reduce the total cost of a fellowship, including tuition, miscellaneous training costs, living allowances, and international airfare, from \$20,000 to about \$14,000. Another alternative would be to change the format of the training to a series of full-time workshops, each lasting from one to four weeks. This would permit even greater flexibility than the current modular structure in choosing the duration of a particular training program.

It is important to note that cost containment efforts have been successful in avoiding increases in the cost of a fellowship. The Census Bureau tuition fee was held constant at \$900 per month during the first 4 years of the project. In 1990 several modifications in the content and calendar of the 7-month course resulted in a cost reduction of \$1,500. As noted above, part-time instructors have been used extensively in order to avoid the high personnel costs associated with maintaining full-time staff year round.

Location of the Training

An objective of ESAYTEC from its inauguration was to offer training in Latin America. This is important for two reasons: it results in much lower costs per participant compared to U.S. based training and it helps to ensure the relevance and quality of the training through the participation of local counterparts as instructors. Although four overseas workshops have been conducted to date, this falls far short of expectations. As discussed earlier, this has been due to the difficulty of finding funding to conduct workshops. A USAID or UNFPA project, for example, may be found to fund a national workshop lasting 2 weeks. The income to the ESAYTEC project from this type of activity hardly covers the administrative and management costs involved in identifying the funding, doing the required paperwork, and preparing and conducting the training.

It would be necessary to conduct an excessive number of ad hoc workshops and seminars in order to cover the annual operating costs of the training program. This approach is simply not feasible from the management standpoint. The ESAYTEC staff will have to redouble efforts to find funding to conduct short-term seminars and workshops in the countries. This funding will have to support more than one training activity, either on a single-year or multiple-year basis. The possibility of shifting ESAYTEC to lower-cost training in country will depend to a large extent upon whether the financial support is forthcoming from donor organizations.

Short workshops or seminars lasting from two to four weeks offer some striking advantages when compared to longer-term U.S. based training. A much larger number of participants can be trained for a lower cost. For example, it would cost about \$30,000 for ESAYTEC staff to do a 2-week in-country workshop on microcomputer applications for statistical operations. Twenty participants could be trained, for a cost of about \$1,500 each. This compares with \$20,000 to train one person in the 7-month modular course.

A significant portion of ESAYTEC training will be moving to Latin America starting in 1991, thanks to the new joint training program with Mexico. Mexico's statistical office, the Instituto Nacional de Estadística, Geografía e Informática (INEGI), will join the Census Bureau in conducting the modular course. The first 5 months will be conducted at the Census Bureau and the last 2 months will take place in Mexico. The portion in Mexico will consist of a full-scale practice survey that will greatly improve the applied nature of the training. The INEGI also will participate in curriculum design and content decisions and will provide some of the instructors for the first 5 months of the program.

Thus, the joint program with Mexico will improve the quality of the training and will help to ensure its relevance to Latin American needs. However, since the overall cost of the modular course will remain about the same, the program with Mexico does not solve the cost problem.

Content of the Training

Participant evaluations of the modular course during the past year point to the need to sharpen the focus of the training. The content of a number of courses needs to be revised to cover fewer topics, with more in-depth treatment of each. The need to reduce the duration of the modular courses and cut costs, as explained above, makes this even more critical.

In order to offer essentially the same training to the same target group in less time, it will be necessary to eliminate some courses. Class time will have to be used much more efficiently in order to achieve instructional objectives. This process has already begun for several of the curricula.

Multiplier Effect

A major goal of ESAYTEC will be to replicate the Guatemala training project in other countries. This has proven to be the best way to ensure that a true multiplier effect occurs, thereby resulting in training that is cost effective. Efforts to equip participants in the modular course with the attitude and skills necessary to train others will continue.

Follow-up Evaluation

A formal program of follow-up evaluation must be implemented as soon as possible. The only formal evaluation done to date is during the training. This is when trainees are probably least able to accurately evaluate the quality of their program. Follow up evaluation by graduates who have returned to their jobs and have tried out their new skills would be very useful. The lack of such an evaluation was painfully evident during the preparation of this report.

The first evaluation questionnaires are scheduled to be mailed out with the ESAYTEC newsletter in February, 1991. Questionnaires will be mailed to individuals who attended the modular course within the past three years. The questionnaires will attempt to determine the extent to which trainees have used what they learned, how many others they have trained, their general perceptions of the training experience, and commendations for how it could be improved.