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CLASSIFICATION PROJECT EVALUATION SUMMARY (PES) - PART I

Report Symbol U-447

1. PROJECT TITLE EDUCATION SECTOR LOAN II	2. PROJECT NUMBER 525-V-043	3. MISSION/AID/W OFFICE
	4. EVALUATION NUMBER (Enter the number maintained by the reporting unit e.g., Country or AID/W Administrative Code, Fiscal Year, Serial No. beginning with No. 1 each FY) 81-3	

5. KEY PROJECT IMPLEMENTATION DATES			6. ESTIMATED PROJECT FUNDING A. Total \$24,035,000 B. U.S. \$13,500,000	7. PERIOD COVERED BY EVALUATION From (month/yr.) September 76 8 To (month/yr.) December 80	
A. First PRO-AG or Equivalent FY 76	B. Final Obligation Expected FY 80	C. Final Input Delivery FY 81		Date of Evaluation Review	

B. ACTION DECISIONS APPROVED BY MISSION OR AID/W OFFICE DIRECTOR

A. List decisions and/or unresolved issues; cite those items needing further study. (NOTE: Mission decisions which anticipate AID/W or regional office action should specify type of document, e.g., airgram, SPAR, PIO, which will present detailed request.)	B. NAME OF OFFICER RESPONSIBLE FOR ACTION	C. DATE ACTION TO BE COMPLETED
1. Review the Loan Implementation Plan and update as needed	Anel Rodriguez AID - Octavio Dominguez, MOE	3/ 6/81
2. Develop a plan for the proper delivery, storage and installation of school equipment.	A. Rodriguez AID - Octavio Dominguez MOE	3/31/81
3. Extend the TDD to allow for the completion of construction activities.	A. Rodriguez Celso Carbonell	3.10/81

9. INVENTORY OF DOCUMENTS TO BE REVISED PER ABOVE DECISIONS

<input type="checkbox"/> Project Paper	<input checked="" type="checkbox"/> Implementation Plan e.g., CPI Network	<input checked="" type="checkbox"/> Other (Specify) Delivery and Installation of Equipment.
<input type="checkbox"/> Financial Plan	<input type="checkbox"/> PIO/T	<input checked="" type="checkbox"/> Other (Specify) TDD Extension
<input type="checkbox"/> Logical Framework	<input type="checkbox"/> PIO/C	
<input type="checkbox"/> Project Agreement	<input type="checkbox"/> PIO/P	

10. ALTERNATIVE DECISIONS ON FUTURE OF PROJECT

A. Continue Project Without Change

B. Change Project Design and/or Change Implementation Plan

C. Discontinue Project

11. PROJECT OFFICER AND HOST COUNTRY OR OTHER RANKING PARTICIPANTS AS APPROPRIATE (Names and Titles)

Anel Rodriguez, Project Manager, HRD, USAID/P

Octavio Dominguez, National Director of Finance, MOE

12. Mission/AID/W Office Director Approval

Signature: *Frank Dominguez*

Typed Name: Aldelmo Ruiz, Director

Date: 3/19/81

PROJECT EVALUATION SUMMARY - PART II

13. SUMMARY

This evaluation covers the period from September 1978 through December 31, 1980.

At the present time, all \$13.5 million have been obligated and all activities are in progress or winding down. Approximately \$9.0 million of accrued expenditures have occurred with \$4.4 million awaiting vouchers for reimbursement.

COMPONENT I - GENERAL BASIC EDUCATION

School Construction - The 30 schools originally programmed are being constructed, of which 20 are completed. These twenty schools have provided increased access to the formal system for 6,660 students throughout Panama. The remaining ten are under construction utilizing the Fixed Amount Reimbursement (FAR) system of financing. They are scheduled for completion before June 1981. Upon completion of the 30, a total of 10,000 students will benefit from this increased accessibility.

Equipment - With the construction of these 30 schools, equipment (including scientific, industrial, vocational, agricultural and home economics) will be installed in each. This equipment will provide these students with the opportunity to obtain practical educational experiences related to Panamanian life previously unavailable to them.

The equipment for each of the 30 schools has been purchased or bid internationally. Currently, the equipment for only 18 of these schools has arrived in country and that for the remaining 12 scheduled to arrive in early to mid-1981. The delivery, distribution, and installation of this equipment must then be monitored prior to full payment to insure achievement of project purposes.

In addition, \$650,000 originally destined for textbook development has been reprogrammed for scientific, vocational and laboratory equipment for an additional 78 schools, which will benefit 12,500 additional students. All of this equipment has also been bid internationally but the delivery and installation could exceed the current TDD by as much as one year.

Curriculum - While the Government of Panama awaits the recommendations of the Coordinating Commission for National Education on textbooks and teachers' guides, a curriculum reform is in process but with a different emphasis.

Curriculum Materials Development - Curriculum didactic materials utilizing local materials (abacus, tridimensional geometric figures, colored reglets, basic calculators, etc.) have been developed with loan funds and are continuing to be used.

Textbooks - There were seventeen textbooks originally printed consisting of a total of 1,150,000 copies. Of these books 590,000 are now in the warehouses of Panama City as well as in the provincial warehouses throughout the country awaiting revisions by the Commission for National Education. There are 380,000 copies of five Mathematics textbooks which are in general use. There are still 180,000 copies of other texts still being used specifically in the areas of San Blas and Bocas del Toro. The decision to utilize these latter textbooks was made by each of the individual communities. However, this is not officially recognized by the Ministry of Education. We believe that it is likely that the majority of the textbooks developed will eventually be reincorporated into the educational system, some in modified form, once the National Commission for Education has completed its work. In addition, the MOE now has developed an in-house capacity to write, edit and print additional texts, programs and teachers guides. While these activities have been temporarily suspended, we expect that additional texts will be developed after the National Commission has established the parameters for Panamanian education.

The Curriculum Library - The purchase of textbooks, reference books, etc. is in progress for the Curriculum Library. The MOE has purchased approximately 1,500 volumes and has ordered the purchase of an additional 3,500, which would expend the loan funds for this line item. Due to the slowness of delivery and the unavailability of some of the volumes within country, this activity will extend past the current TDD.

The Ministry Print Center - The Print Center has continued to develop its capability to assist the MOE in the production of materials. Through the utilization of loan funds a completely trained technical staff is in place and the Center now has the capacity to print at least 350,000 volumes per year.

Component II: - Teacher Education - Teacher training, both pre-service and in-service is continuing in the areas of teaching strategies, student evaluation, program planning, teaching methodologies, etc. providing a better trained professional staff of teachers which can relate whatever written curriculum is finally selected to the lives and learning experiences of Panamanian children. In addition, the loan has provided training for approximately 22,000 teachers. This is more than twice as many as originally planned.

All equipment and materials have been ordered for this component. However, as in the above cases, the delivery problems will prevent the Mission from paying the final bills prior to the TDD. The revised teacher training programs are proceeding according to schedule.

Component III: - The Polytechnic Institute - The Polytechnic Institute has continued to work with industry and has upgraded its curriculum to provide its graduates with the capability to enter into the mid-level industrial and technical fields available in Panama. The institution has continued to provide extensive in-service educational training programs to its staff and has almost completely modified its curriculum and system of instruction to meet the

challenges of a rapidly changing society. Currently, all loan activities have been completed or are in their final stages. All equipment programmed has been purchased and delivered. Two of the three campuses have been constructed. The third one (Tocumen) is due for completion in early 1981. This construction project is behind schedule due to a series of legal problems on the initial award of the bid. This resulted in a delay of approximately five months in the initiation of construction activities. All problems have now been resolved and USAID/P is confident that all activities and projects under the Polytechnic institution will be completed prior to June, 1981.

Component IV: - CEDECANI - CEDECANI has also basically completed each of its goals and objectives under the loan. However, there are currently 14 research projects in process which are due for completion in March 1981. It is possible that some of these will not be finished on time and it would again be to AID's benefit to allow time for the completion of each of these projects. They are all financed by "payment only for a finished product" and several of these studies could assist USAID/P in developing its strategy and program for the future in the areas of Education and Human Resources Development.

The major problems have been: (1) a series of serious constraints in the delivery of equipment and materials to the Educational Centers; (2) continued delays in the construction of the Basic Cycle Schools, and (3) the elimination of the reform curriculum for Panama. AID has attempted to assist in the correction of these problems but with little success.

However, the GOP has created by law a Coordinating Commission for National Education composed of representatives from each of the educational organizations, physicians, the Catholic Church and the Ministry of Education which is studying and analyzing the National Educational System of Panama. This Commission has been given the responsibility of recommending how the educational system is to be restructured. They are currently studying the basic philosophy, policy, goals and objectives on which this system will be based. Given the recent statements by the Ministry of Education and the Ministry of the Presidency, the new curriculum with all the pertinent modifications should be ready for the 1982 school year. Although it is not now possible to specify the nature of the educational system which will result from the work of this Commission, the Mission has informally been given assurances at high levels within the GOP that a Curriculum Reform Program will eventually be completed although not necessarily in its original form. Because of a political situation which still is manifested occasionally at sessions of the Coordinating Commission for National Education the MOE has not formalized these assurances nor has the Mission requested it to do so.

Currently, the only aspects of the loan which are not continuing as originally programmed are: (a) the production (writing, editing and printing) of textbooks; (b) the production of teachers guides, and (c) teacher training seminars related to each of the textbooks and guides.

On the basis of this evaluation and on our on-going monitoring of this project, we believe that the project is fulfilling its original purpose despite the difficulties encountered by the GOP relating to curriculum content and textbook distribution. Due to these delays as well as those in construction and equipment procurement USAID/P will extend the TDD by one year from March 15, 1981 to March 15, 1982.

14. EVALUATION METHODOLOGY

This evaluation was initiated in 1979 by a group of distinguished educators from the National Advisory Council for Education and representatives from A.I.D. However, the evaluation was never completed due to the abolishment of the Educational Reform Program in November 1979 and the subsequent resignation of Advisory Council members. Information obtained from this partially-completed evaluation and subsequent updating by the MOE and A.I.D. officials served as the basis for the current PES.

15. EXTERNAL FACTORS

One of the basic assumptions underlying the loan is that the Government of Panama will continue its National Policy emphasizing rural development and the integration of Government programs. However, in November 1979 a series of large groups comprised of traditional conservatives of the Catholic Church, the private sector, teacher organizations and politicians who were opposed to the Government joined together and systematically opposed the Educational Reform Program, classifying it as sectarian, secret, casual, doctrinaire and responsive to specific Leftist ideological tendencies sponsored by the Government.

In addition the teachers unions went on strike for increased salary and utilized the educational reform program as a tool to force the Government to yield to its demands. As a result, the Government of Panama issued a decree abolishing the Educational Reform Curriculum (which was partially financed under Loan 043) and placed the Panamanian school curriculum in a state of limbo. A National Coordinating Commission for Education was created to analyze, study and recommend a complete system for the restructuring of the National Educational System for Panama.

This resulted in a reprogramming and modification of the Loan. The following adjustments were made:

- Elimination of the preparation, printing and reprinting of textbooks, books, curriculum, programs, teacher guides and other didactic materials.
- Modification of the basic plan for school construction (to eliminate student dormitories, house of the Director and of Professors, etc.).
- Reorientation and reprogramming of seminars and training of Ministry of Education staff, within the Sub-Component II (Teacher Training Center).

The funds assigned to the deleted programs and activities were transferred and reprogrammed to provide additional equipment, furniture, laboratories and materials to 78 Educational Centers throughout Panama.

OUTPUTS	INPUTS	PROGRESS TO DATE
<p><u>Output N° 1</u></p> <p>Design of new curriculum for grades 1-9 which will be practically oriented and community centered.</p>	<p><u>Input N° 1</u></p> <ul style="list-style-type: none"> - \$1,351,000 (original loan) for curriculum development and technical education. \$754,000 (reprogrammed loan) This includes: <ul style="list-style-type: none"> - \$766,000 (original loan) \$398,000 (reprogrammed loan) for technical cooperation and training. - \$585,000 (original loan) \$356,000 (reprogrammed loan) for materials and equipment to produce curriculum materials. 	<p>Three teams of educators were organized by the Ministry to design and carry out a time-phased program for the development of textbooks, teachers guides, methodological manuals and curriculum programs. Fifty-five (55) to seventy-six (76) educators worked part-time as members of these teams from October 1976 to November 1979.</p> <p>During this period the curriculum programs for the fifth, sixth and ninth grades were completed. Curriculum programs for the other six grades were completed under the previous A.I.D. Education Sector Loan I. During the first quarter of 1977 the Ministry began evaluating, testing and revising the curriculum programs for grades I, II and VII and during the third quarter of 1977 initiated the development of industrial arts curricula for grades III, IV and V. The remainder of the funds under this line item have been reprogrammed for purchase of equipment and furniture for additional educational centers due to the elimination of the curriculum reform program in Panama.</p>

OUTPUTS	INPUTS	PROGRESS TO DATE
<p><u>Output N° 2</u></p> <p>Develop and publish textbooks, teachers guides and other instructional materials.</p>	<p><u>Input N° 2</u></p> <ul style="list-style-type: none"> - \$978,000 (original loan) \$828,000 (reprogrammed loan) for printing educational materials. - \$218,000 (original loan) \$123,000 (reprogrammed loan) for Technical Cooperation and Training of MOE Print Shop. - \$760,000 (original loan) \$705,000 (reprogrammed loan) for purchase of printing materials. 	<p>Twenty-one (21) of forty-five (45) titles were completed. Seventeen (17) were printed and distributed. Three titles (first grade Mathematics and first and second grade Spanish) were developed and printed by the MOE Print Center under Education Sector Loan (036). Five (5) titles (second grade Mathematics, third grade Spanish, fourth to sixth grades Art Education) were completed during the third quarter of 1976. Nine (9) additional texts were completed and distributed in 1979. These are: fourth and ninth grades Social Science, fourth and seventh grade Spanish, seventh grade Agriculture, second grade Social Studies, fourth grade Mathematics and two different editions for fourth to ninth grades Natural Sciences.</p> <p>Eight other books were sent to the printer prior to the elimination of the curriculum reform program, but never put in print. The Print Center at the MOE produced all of the curriculum programs for grades 1-9 of the Basic Cycle System and the teacher's guides for grades one, three and seven. Due to the elimination of the educational reform program, more money has been placed on the purchase of equipment and other funds were reprogrammed into the purchase of equipment and furniture for the educational centers. The MOE Print Center is now printing all materials, grade cards, educational notices, articles, etc., but is very limited in the production of curriculum materials.</p> <p>Also in November 1977 the Center reprinted 5,000 copies each of the first grade Mathematics textbooks which were developed and printed under Education Sector Loan I (036). With the additional presses and other printing machinery acquired under Loan 043, the MOE Print Center now has the capacity to print up to 350,000 copies of books annually.</p>

OUTPUTS	INPUTS	PROGRESS TO DATE
<p><u>Output N° 3</u></p> <p>A functional, specialized well-equipped curriculum library facility at the MOE.</p>	<p><u>Input N° 3</u></p> <p>- \$45,000 (original loan) \$44,000 (reprogrammed loan) for development of curriculum library.</p> <p>\$35,000 for books and equipment.</p> <p>\$10,000 (original loan) \$9,000 (reprogrammed loan) for technical assistance.</p>	<p>A number of books have been purchased (approximately 1,500). The Ministry acquired space in Escuela Venezuela for the location of the library and it has been remodeled into a study center-library for the curriculum staff and the MOE.</p>
<p><u>Output N° 4</u></p> <p>Construction or conversion of up to 30 Basic Cycle Schools (7-9).</p>	<p><u>Input N° 4</u></p> <p>- \$3,600,000 (original and reprogrammed loan)</p>	<p>The decision to construct the Basic Cycle Schools with the participation of local communities necessitated the establishment of a construction unit within the Ministry of Education. This entailed hiring of personnel to design, administer, purchase supplies and equipment, construct and supervise the construction of the Basic Cycle Schools and Teacher Training Center. The organizing and motivating of local communities in which the Basic Cycle Schools were to be constructed was assigned to the Directorate of General Basic Education. It also required the services of a lawyer and other personnel to obtain title to the land upon which the schools were to be built. Because of difficulties in hiring qualified personnel, the General Directorate of Engineering and Architecture was not legally established until February 14, 1977. All conditions precedent to disbursement for school construction were complied with on May 11, 1977 and construction of the first school was initiated shortly thereafter.</p>

16. and 17. INPUTS AND OUTPUTS (CONT.)
COMPONENT I - GENERAL BASIC EDUCATION

OUTPUTS	INPUTS	PROGRESS TO DATE		
<u>Output N° 4</u>	<u>Input N° 4</u>	As of December 31, 1980 the following schools were completed or under construction:		
		<u>SCHOOL</u>	<u>PROVINCE</u>	<u>PERCENT COMPLETED</u>
		Climaco Delgado	Panama	100%
		Francisco Beckman	Panama	100%
		Cañazas	Veraguas	100%
		San Roquito	Cocle	100%
		Progreso	Chiriqui	100%
		San Joaquín	Panama	100%
		Río Indio	Colón	99%
		Boro	Veraguas	100%
		Río de Jesús	Veraguas	100%
		Limonés	Chiriqui	100%
		Chitra	Veraguas	98%
		Santa Fe	Veraguas	95%
		La Mesa	Veraguas	22%
		Buenos Aires	Veraguas	40%
		El Silencio	Bocas del Toro	80%
		Chepo	Panama	88%
		San Félix	Chiriqui	67%
		Torrijos-Carter	Panama	33%
		Garachiné	Darién	45%
		Sasardi-Mulatupo	Colón	55%
		El Pilon	Veraguas	20%
		Las Palmas	Veraguas	17%
		Changuinola	Bocas del Toro	100%
		Santa María	Herrera	100%
		Parita	Herrera	100%
		Nuevo Arraiján	Panama	100%
		Santa Librada	Panama	100%
		Los Andes	Panama	100%
		República Árabe de Libia	Panama	100%
		Pocri	Los Santos	100%

16. and 17. INPUTS AND OUTPUTS (CONT.)
COMPONENT I - GENERAL BASIC EDUCATION

OUTPUTS	INPUTS	PROGRESS TO DATE
<p><u>Output N° 5</u></p> <p>Furniture and equipment for 30 Basic Cycle Schools.</p>	<p><u>Input N° 5</u></p> <p>- \$2,535,000 (original loan) \$3,735,000 (reprogrammed loan)</p>	<p>The Ministry has bid the equipment and furniture for all 30 schools. All materials for 18 schools have arrived and been delivered. The remaining equipment and furniture is pending arrival.</p> <p>With the reprogramming of funds due to the elimination of the educational reform program, the MOE will now provide equipment and furniture for approximately 78 schools and centers throughout the country.</p>

COMPONENT II - Transformation of the Traditional Normal School to an Education Development Center for Teacher TrainingGENERAL INPUTS (\$3,350,000) original loan (\$2,900,000) reprogrammed loan

The original loan provides a total of \$2,010,000 for this Component: \$840,000 for in-service teacher training programs (includes technical cooperation, training, equipment, furniture and materials), \$520,000 for construction and modification of the Santiago Educational Development Center (SDC) and \$650,000 for furniture and equipment for the SDC. After reprogramming, the loan provides a total of \$1,560,000 for this Component: \$716,000 for in-service teacher training programs (a decrease of \$124,000), \$334,000 for construction and modification of the Santiago Educational Development Center (SDC) (a decrease of \$186,000), and \$510,000 for furniture and equipment for the SDC (a decrease of \$140,000). GOP counterpart contributions include \$360,000 for in-service teacher training costs, \$540,000 for construction of SDC, \$240,000 for furniture and equipment and \$200,000 for logistical support.

OUTPUTS	INPUTS	PROGRESS TO DATE
<p><u>Output N° 1</u></p> <p>A diversified five-year curriculum developed and instituted in the Educational Development Center to be established in Santiago which will meet requirements for instructing pre-service and in-service teachers to implement the new curriculum being established for the General Basic Education System.</p>	<p><u>Input N° 1</u></p> <p>- \$840,000 (includes inputs 1-3) \$716,000 (reprogrammed loan)</p> <p>Workshops and meetings will be organized to develop different aspects of an organizational and administrative structure for the Center, and to determine curriculum objectives and design for both pre-service and in-service training activities. The workshops will include participants from the Center's core staff, the MOE and the Faculty of Philosophy, Letters and Education of the University of Panama. The participants will review the responsibilities of the Educational</p>	<p>As a first step in its program to transform the teacher training system for grades 1-9, the MOE has converted the present Normal School in Santiago to a comprehensive Educational Development Center. The Center is responsible for all pre-service and in-service training for the Basic Cycle System. The curriculum was extended from three to five years to provide advanced training in the revised teaching methodology and to permit an additional two years of study in specific subject areas for both pre-service and in-service teachers who will be phased out.</p> <p>A second teacher training center is being planned in Paraiso for the teachers of urban Panama.</p> <p>During the past year the Educational Development Center along with the Ministry has been involved in the following activities:</p> <ul style="list-style-type: none"> - Development and revision of a new teacher training curricula for grades 1-9. - Planning and organizing the operations of the Center in relation to training laboratories for teachers or Basic Cycle School industrial arts shops, agricultural shops, and home economics facilities. - Establishment of an in-service training section in the Center.

OUTPUTS	INPUTS	PROGRESS TO DATE
<u>Output N° 1</u>	<u>Input N° 1</u> Development Center and prepare its guidance and organizational framework	<ul style="list-style-type: none"> - Development of the Educational Teaching Center. - Coordination of a practice teacher program between the Center and the Basic Cycle School "El Canada". <p>This has been halted due to the elimination of the educational reform curriculum and the Centers are now awaiting the decisions of the National Educational Evaluation Committee prior to proceeding with a new revised curriculum. However, work is still continuing on the revisions of teaching strategies, basic materials, literacy, indian students and administration, which can be utilized no matter what type of curriculum is employed.</p>
<u>Output N° 2</u> A trained professional, teacher training and in-service staff in place.	<u>Input N° 2</u> <ul style="list-style-type: none"> - \$840,000 (includes inputs 1-3) \$716,000 (reprogrammed loan) A permanent staff of (a) approximately one hundred trained administrative and teaching personnel for the regular staff complement of the five-year pre-service curriculum and the special two-year in-service upgrading courses, plus	<p>Fifty teacher trainers and over 100 administrators have been trained. Further training in specific curricular areas has been curtailed until the National Educational Evaluation Committee determines the curricular content for each of the specific areas. However, training for school administrators, formation of teachers, strategies, operation of industrial shops and teaching in specific indian areas is being continued.</p>

COMPONENT II -- TRANSFORMATION OF THE TRADITIONAL NORMAL SCHOOL TO AN EDUCATION DEVELOPMENT CENTER FOR
TEACHER TRAINING

OUTPUTS	INPUTS	PROGRESS TO DATE
<u>Output N° 2</u>	<u>Input N° 2</u> (b) 1 semi-permanent cadre of 50 teacher trainers for extension training and in-service education will be required.	
<u>Output N° 3</u> An In-Service Training Program in operation to orient, retrain and/or upgrade some 14,000 primary and lower secondary teachers.	<u>Input N° 3</u> - \$840,000 (includes inputs 1-3) \$716,000 (reprogrammed loan) The first element of the MOE plan is to reorient and retrain all teachers in grades 1-9. This plan will be implemented and phased over the next five years.	<p>The MOE carried out the first orientation seminars during the school vacation of 1975 (January to March) in which 500 primary level teachers were introduced to the philosophy, strategy, techniques and plans of the educational reform program.</p> <p>During the remainder of 1975 and through the end of 1976, 11,000 additional teachers and administrators received in-service training in 66 courses sponsored by the MOE in all nine Provinces.</p> <p>During 1977 and 1978 sixty-five courses were held in which 10,400 teachers and administrators participated. During the past three years the MOE has managed to train almost twice as many teachers as projected in the CAP.</p> <p>During 1979 and 1980 the training programs were severely curtailed due to the uncertainty over the future of a national curriculum. However, pre-service and in-service training courses in all curricular areas are being held in teaching techniques, strategies, evaluation, supervision, etc. These areas are unaffected by the elimination of the National Curriculum and can be employed no matter what curriculum is instituted. The courses are designed for pre-service teachers and upgraded to provide additional training and experience for in-service teachers.</p>

16. and 17. INPUTS AND OUTPUTS (CONT.)

COMPONENT II - TRANSFORMATION OF THE TRADITIONAL NORMAL SCHOOL TO AN EDUCATION DEVELOPMENT CENTER FOR TEACHER TRAINING

OUTPUTS	INPUTS	PROGRESS TO DATE
<p><u>Output N° 4</u></p> <p>An adequately equipped educational development center with all necessary facilities operating in Santiago.</p>	<p><u>Input N° 4</u></p> <p>- \$520,000 \$334,000 (reprogrammed loan)</p> <p>For construction and renovation.</p> <p><u>Input N° 5</u></p> <p>- \$650,000 \$510,000 (reprogrammed loan)</p>	<p>Architectural plans were completed and approved by A.I.D. for the conversion of the school's bakery into a general industrial arts shop, for the construction of an education technology shop, for the renovation of classrooms and men's dormitories, another industrial shop, kitchen and administrative offices. All construction activities have now been completed.</p> <p>The Ministry took an inventory of the equipment and furniture at the Santiago Educational Development Center and developed lists of the required items for each area. International Bids for equipment were prepared and all equipment for the SDC has been ordered and 98% has been delivered.</p>

GENERAL INPUTS (\$4,270,000)

The loan provides a total of \$2,380,000 for this component: \$1,150,000 for the construction and modification of physical facilities, \$660,000 for shop equipment and machinery, and \$550,000 for upgrading of the staff of the Polytechnic Institute and \$20,000 for materials. The GOP counterpart contributions include \$810,000 for construction and modifications of physical facilities, \$420,000 for shop equipment and machinery, \$220,000 for technical cooperation and training, and \$440,000 for land. This component was unaffected by the loan reprogramming.

OUTPUTS	INPUTS	PROGRESS TO DATE
<p><u>Output N° 1</u></p> <p>Design of a Vocational/Technical Education relevant to National Manpower needs and job training requirements.</p>	<p><u>Input N° 1</u></p> <p>- \$550,000 (combined total of Inputs 1-4)</p> <p>Technical cooperation and training will be provided to Polytechnic personnel, including workshops and seminars in such fields as manpower needs and assessment, curriculum development, analysis of job performance and planning, program planning and evaluation for the adequate implementation of a flexible industrial education program capable of being adapted to meet changing conditions and needs.</p>	<p>Polytechnic acquired the services of an expert in curriculum development and educational resources. In September 1977, a three-month course in curriculum development for professors of the Department of Industrial, Civil and Electro-Mechanics was held.</p> <p>In January 1978, a second seminar was initiated for all of the teaching personnel in the Department of Metal Mechanics. The following subjects were covered in the seminar: Trade and Job Analysis, Curriculum Planning, Teaching Media, Teaching Methods, Evaluation Objectives and Testing. Evaluation and Program Planning seminars were developed and held in 1979 for approximately 45-50 part and full time professors each. In 1980, two additional seminars were held for 50 professors each. They were entitled Planning and Utilization of Materials and Methodology of Teaching and Evaluation.</p> <p>In an effort to develop a curriculum which responds to current and future needs of Panamanian industry, a manpower skills inventory of local industrial plants was conducted in 1977 and updated in January 1980. This inventory has been utilized in the Polytechnic seminars to identify operations and skills which should be given priority consideration in developing the various curricula.</p>

OUTPUTS	INPUTS	PROGRESS TO DATE
<p><u>Output N° 2</u></p> <p>Design of an Integrated Curricula for the Polytechnic System based on the Instructional System Approach.</p>	<p><u>Input N° 2</u></p> <p>- \$550,000 (combined total of Inputs 1-4)</p> <p>This training component will consist of short-term observation study tours for Polytechnic administrative personnel. They will discuss and observe the development and implementation of the systems approach to instruction and training, including the use of complementary software and equipment at selected technical institutes in Latin America and in the United States. The study of the administration of a modern technical institute will provide background needed for more effective use of technical assistance.</p>	<p>Four observation study trips have been undertaken. The first trip was from October 31, 1976 to November 13, 1976. Participants included Dr. Victor Levi, Director of the Polytechnic Institute, Eng. Pedro Rebolledo, Coordinator of Polytechnic Loan Component, and Lic. Carlos Perez, Chief of the MOE Department of Finances. This group visited vocational-technical schools in Washington, D.C.; Baltimore, Maryland; Long Island, New York; Charlotte, North Carolina; Minneapolis, Minnesota, and Torrance, California. They also attended a three-day seminar on competency based education in Washington, D.C. and conferred with A.I.D. personnel in the Labor and Latin American Bureau Education Offices.</p> <p>A second trip to the United States was made in September 1977, by nine persons, including one representative from the Ministry of Education, one from the National Training Center (CENAFORP) and seven Polytechnic professors. The group had an itinerary similar to the first group, which went to the U.S. in October 1976.</p> <p>Another group of ten persons visited the facilities of the Monterrey Technical Institute in August 1977. This group consisted of two persons from the MOE, two persons from CENAFORP and six Polytechnic professors.</p> <p>In October 1977, nine persons visited the National Apprenticeship Service (SENA) installations in Colombia. This group was made up of three representatives of the MOE, three from CENAFORP and three from Polytechnic.</p> <p>Forty-one (41) professors attended a three-month training program in the United States (January-April 1980) where they learned how to develop courses, teaching materials, student materials, etc. in a Competency-Based format. The professors returned with 56 courses completely developed which have been introduced into the regular curriculum program of the University.</p>

OUTPUTS	INPUTS	PROGRESS TO DATE
<p><u>Output N° 3</u></p> <p>A plan for determining educational materials requirements and the acquisition and modification of both print and non-print materials.</p>	<p><u>Input N° 3</u></p> <p>Initial technical assistance.</p>	<p>A series of three-month courses have been developed for professors in developing the plan and in assisting them in the acquisition and modification of materials. This was also covered in the three-month training course in the United States where 41 full time professors attended. Six individual courses have been held in Panama for the Faculty.</p>
<p><u>Output N° 4</u></p> <p>A replicable and adaptive instructional systems technology based on teacher training program.</p>	<p><u>Input N° 4</u></p> <p>Internal Technical Assistance.</p>	<p>Courses in curriculum development, teaching methodology, evaluation, utilization of materials, program planning and instructional design have been conducted for the professors in Panama. The training program in San Antonio, Texas was designed to provide the professors with the knowledge and ability to replicate and adapt their system in Panama. The Polytechnic staff is utilizing the multiplier effect to train the remainder of the Faculty who did not have the opportunity to participate in the U.S. program.</p>
<p><u>Output N° 5</u></p> <p>Newly constructed and remodeled physical facilities provided with necessary equipment and machinery.</p>	<p><u>Input N° 5</u></p> <p>\$1,150,000 for construction and renovation.</p>	<p>Up until the end of 1977 very little progress had been achieved in building the new facilities because of the problems incurred in obtaining construction sites.</p> <p>In November 1977, the land situation was resolved. It was decided to construct third floor classroom additions to each of the existing Polytechnic facilities located on the main campus of the University of Panama. These extra classrooms solved the short range problem of housing 1979 enrollment of 5,000 students.</p>

OUTPUTS	INPUTS	PROGRESS TO DATE
<p><u>Output N° 5</u> (Continuation)</p>	<p><u>Input N° 5</u></p> <p>- \$660,000 for furniture and equipment for the Polytechnic Institute.</p>	<p>To satisfy the long-term requirements for the burgeoning enrollment, the Polytechnic Institute acquired 10 hectares of land in David and 15 hectares of land near Tocumen to construct two additional campus.</p> <p>In David one large multipurpose shop facility, 10 classrooms and 10 administrative offices were constructed for a potential enrollment of 2,000 students. At the Tocumen site metal working, woodworking and automotive shops as well as two classroom wings are currently under construction. They are currently 75% complete. Additional shops, administration facilities and classrooms will be added when funds from other sources become available. In the interim, classes in electronics, electricity, hydraulics and the various engineering fields will be conducted at the main campus in Panama City.</p> <p>Equipment lists were developed for the following shop areas: woodworking, machine shop, welding, computer science, electronics, electricity, sheetmetal work and auto mechanics. The entire A.I.D. contribution of \$660,000 for this line item has been spent.</p> <p>All equipment and furniture for the Polytechnic Institute has been acquired for all three campuses.</p>

GENERAL INPUTS (\$730,000) original loan (\$667,000) reprogrammed loan

The original loan provided a total of \$425,000 for this Component: \$250,000 for research projects, \$90,000 for start up costs of the Center, \$25,000 for equipment and furniture, \$10,000 for technical assistance and \$50,000 for evaluation of Loan 043. After reprogramming, the loan now provides a total of \$362,000 for this Component: \$202,000 for research projects (a decrease of \$48,000), \$90,000 for start up costs of the Center, \$25,000 for equipment and furniture, \$10,000 for technical assistance and \$35,000 (a decrease of \$15,000) for the evaluation of the loan. GOP counterpart contributions include \$80,000 for Research Projects, \$15,000 for equipment and furniture, \$75,000 for technical assistance and \$135,000 for administrative and logistical support.

OUTPUTS	INPUTS	PROGRESS TO DATE
<p><u>Output N° 1</u></p> <p>Institutional capacity developed in the Research Center through the design and execution of actual research activities.</p>	<p><u>Input N° 1</u></p> <p>- \$10,000</p> <p>Thirty-six (36) mm of internal technical assistance will be provided to assist the Center:</p> <p>(1) develop an organized data information system which can make optimum use of available statistical data; (2) develop systematic evaluation procedures, and (3) train project managers of proposed research activities in applied statistical and research design.</p>	<p>On October 24, 1975, the University of Panama and the Ministry of Education signed an agreement which established the CENTER FOR THE DEVELOPMENT OF THE NATIONAL CAPACITY FOR RESEARCH (CEDECANI).</p> <p>CEDECANI has established lines of communication with the following research institutions: COLCIENCIAS (Colombia), CONACYT (Mexico), CONICUT (Costa Rica), SPINES, UNISIT, ALAI, Industrial Development Center, Institute of Agricultural Research (Costa Rica) and the Center for Industrial Research (Honduras). These communication lines will assist in the organization and development of statistical data as well as interchange in evaluation assistance.</p>

OUTPUTS	INPUTS	PROGRESS TO DATE
<p><u>Output N° 1</u></p>	<p><u>Input N° 1.1</u></p> <p>Short-term training will be provided to Center personnel to visit successfully operating research centers in other countries, and in-country seminars will be held to train researchers in research design and analytical techniques, and to orient key officials from sectoral Ministries and the private sector to the services available at the Center.</p> <p><u>Input N° 1-2</u></p> <p>- \$25,000</p> <p>Limited special equipment will be provided to the Center's Scientific and Technical Documentation Section.</p>	<p>CEDECANI personnel have visited Research Center in Costa Rica (CEMIE). This resulted in technical assistance being provided to the research project Native Languages. The Director has participated in the Regional UNESCO Science and Technology Seminars.</p> <p>A documentation center was established within CEDECANI. CEDECANI has provided technical assistance in establishing Centers in other government institutions such as the Ministries of Health, Education, Housing, CCFINA and DIGEDECOM.</p> <p>Special equipment has been purchased for the documentation center. This includes: bookshelves, card catalog file, magazine racks, mimeograph machines.</p>

16. and 17. INPUTS AND OUTPUTS (CONT.)COMPONENT IV - DEVELOPMENT OF APPLIED RESEARCH CENTER

OUTPUTS	INPUTS	PROGRESS TO DATE
<p><u>Output N° 2</u></p> <p>Research Fund established.</p>	<p><u>Input N° 2</u></p> <p>- \$250,000 (original) \$202,000 (reprogramming)</p>	<p>To date CEDECANI has submitted sixteen research projects to USAID for approval and all were approved. Two of the sixteen have been completed and the remainder are scheduled for completion prior to March 1981.</p> <p>The approved projects are:</p> <ol style="list-style-type: none"> 1. Weeds which Hinder the Development of Crops in Panama* 2. Identification of Country Activities in the Maritime Sector* 3. Research of Native Languages in Panama 4. Research and Evaluation on the Application of an Operating Pattern for the Publication of Educational Information on the Technological Science of Lodging Construction and Public Works 5. Establishment of a National System of School Libraries 6. Evaluation of the Traditional Medicine in the Republic of Panama. Ethnobotanic and Phytochemistry Study 7. Effects of the Nutritional System and Other Factors on the Urinary PH 8. School Map of the Metropolitan Area of Panama 9. Status and Perspective of Artisan and Industrial Production of Wooden Objects and Furniture <p>* These two projects have been completed.</p>

OUTPUTS	INPUTS	PROGRESS TO DATE
<p><u>Output N° 2</u></p>	<p><u>Input N° 2</u></p>	<p>10. Characterization and Analysis of the Principal Variances which Incur in the School Failure and Desertion at the Middle Level of the Panamanian Educational System</p> <p>11. Guide for the Application of Solar Energy to the Panamanian Architecture</p> <p>12. Preassembling: Production and Practical Application to Panamanian Architecture</p> <p>13. A Study of Flowers and Ecological Distribution of the Ferns Located at "La Libertad" Park</p> <p>14. Calcium-Opiate</p> <p>15. Pharmacology and Toxicology of Medicinal Plants of Folkloric Use in the Republic of Panama. Complement</p> <p>16. "Perspectives of Education Offering in an Urban Marginal Community" (Cerro Batea, San Miguelito)</p>
<p><u>Ouput N° 3</u></p> <p>Evaluation of Loan</p>	<p><u>Input N° 3</u></p> <p>- \$50,000 (original loan)</p> <p>- \$35,000 (reprogrammed loan)</p>	<p>A series of seminar-workshops were held in 1978 to provide training in evaluation to individuals in the MOE involved in project implementation and evaluation. A formal evaluation was completed on the loan in April, 1978 resulting in implementation and design changes noted in the first PES.</p>

18. PROJECT PURPOSE

PROJECT PURPOSE	INDICATORS	PROGRESS TO DATE
<p>To expand the capacity of the formal education system to provide efficiently, meaningful and useful learning experiences to all rural Panamanians in grades 1-9.</p>	<p>Changes in present curriculum which lead to students attaining practical skills useful to individual-community needs, and which allow them to relate the content of educational programs to their individual life experiences.</p> <p>One hundred percent (100%) increase in the number of rural Panamanians enrolled in grades 7-9 from the present number of 12,667 to over 25,000 by 1980.</p> <p>Cost-efficient operation of the general basic education system as evidenced by an increase in student-teacher ratio from 1:26 to 1:35.</p> <p>Ten percent (10%) annual reduction in the rates of desertion and repetition beginning in 1977.</p>	<p>New curriculum materials have been developed under the loan as well as instructional devices for students. These have been distributed on a pre-examination basis for students to try out prior to their final production and delivery to schools. These devices utilize the local materials and help the student focus in on himself and his community and include abacus, pendulum, colored reglets, basic calculators, base ten set, tridimensional geometric figures, plane geometric figures.</p> <p>The number of students enrolled in grades 7-9 has risen from 12,667 in 1976, 17,238 in 1977, to 25,283 in 1978, to 32,601 in 1979.</p> <p>There has been an increase in the teacher-student ratio from 1:26 to 1:40. However, this is not a result of cost efficient operations, it is a result of insufficient classrooms available for students.</p> <p>The annual desertion and repetition rates have remained approximately the same. There has not been a significant reduction in the figures.</p>

PROJECT PURPOSE	INDICATORS	PROGRESS TO DATE
	<p>By 1979, the average number of years needed for students to complete the 9th grade will be reduced by 20%.</p> <p>Increased learning potential on graduates of the Basic Cycle Schools.</p> <p>Increase at an annual rate of 5% of the percentage of the rural graduates of the Basic Cycle System continuing their education in both academic and vocational fields.</p> <p>The development by 1979 of a core of 3,500 re-trained teachers for grades 7-9 who possess a minimum five year teaching certificates.</p> <p>Degree to which teaching personnel are capable and motivated to teach new academic and vocational programs for the first nine grades of general basic education</p>	<p>The average estimated number of years needed to complete the 9th grade was 11.76 years. There are no comparative statistics available at the present time.</p> <p>Statistical data currently unavailable.</p> <p>A 5% annual increase in rural students continuing their education has been achieved.</p> <p>As of 1977 none of the teachers had completed their retraining. As of December 1980, 488 have completed their five-year Teaching Certificates.</p> <p>Statistical data currently unavailable.</p>

PROJECT PURPOSE	INDICATORS	PROGRESS TO DATE
<p>Provide middle-level manpower in industrial and technical fields.</p>	<p>Direct correlation of vocational industrial instruction programs at all levels of the Polytechnic System to Panama's present and projected manpower and job performance requirements.</p> <p>An integrated curriculum for the Polytechnic Institute allowing for efficient upward and lateral student mobility.</p> <p>Degree to which qualified vocational teaching personnel are teaching at both secondary and post-secondary levels.</p> <p>Increased earnings potential of graduates to all levels of the Polytechnic System.</p>	<p>Needs Assessment was conducted and current curriculum and instructional development workshops at the Polytechnic Institute are based upon the findings.</p> <p>Current curriculum and instructional development workshops are programmed to develop a curriculum based upon an instructional systems approach. These workshops are designed to produce an integrated curriculum for the Polytechnic Institute.</p> <p>As of December 1980, 1640 professors had received training in vocational education and teaching methodologies as well as 100 professors at the post-secondary levels.</p> <p>Information is currently being developed by the Polytechnic Institute. However, at the present time available information indicates that about an 18% increase in training potential has been achieved by the graduates.</p>

18. PROJECT PURPOSE

(Continuation)

PROJECT PURPOSE	INDICATORS	PROGRESS TO DATE
<p>Carry out research and evaluation activities to facilitate adjustments in education programs at all levels.</p>	<p>Application of the findings of research and evaluation activities to modify and revise current education programs and/or develop cost-effective alternative approaches.</p> <p>Development of a continuous needs assessment capability in vocational and industrial fields.</p>	<p>Research projects are still in progress and sufficient data has not been generated at present to provide the necessary information needed for modifications.</p> <p>A National Needs Assessment was conducted by the Polytechnic Institute in the vocational and industrial areas. The process is still continuing in both the Polytechnic Institute and CEDECANI.</p>

19. PROJECT PURPOSE AND INDICATORS

PROJECT GOAL	INDICATORS	PROGRESS TO DATE
<p>The overall objective of the loan is to enable Panamanians, especially those from rural areas, to lead more productive lives and contribute more effectively to social and economic development.</p>	<p>The degree to which there is increased labor force productivity.</p> <p>The degree to which there is increased economic opportunities for men and women, especially in rural areas.</p> <p>The degree to which there is increased levels of health, nutrition, education, agriculture among currently deficient population groups.</p>	<p>Statistical information is currently being analyzed. At the present time, there has been an increase in labor force productivity, an increase in economic opportunities and the levels of nutrition, health and education have risen, but the exact statistical figures will be unavailable until the statistical analysis is completed.</p>

20. BENEFICIARIES

Education Sector Loan II is part of the Panamanian Government's effort to expand, transform and reorient the education program at all levels. It is designed to assist in the correction of the existing imbalance in the access to education among the rural and urban groups. In December 1979, the enrollment of the general reform education program amounted to 206,585 students, representing 59%; this percentage compared to the one of 1976 which was 36%, indicates that there has been a considerable increase in the transformation of the reform system, especially in the rural areas. The number of teachers working in the general reform basic cycle schools amounted to 8,423.

Since the initiation of the Loan, actions have been taken to transform and develop the Sub-System of General Basic Education through training, administrative and logistic help, pedagogical workshops, and other activities. In reference to the new curriculum: plans, programs, books and other educational aids as well as technical cooperation, equipment and materials for the preparation of teaching materials, audiovisual and innovative methods of teaching have been contributing to the process of improving the teaching quality.

Regarding the Polytechnic Institute, installation of electronic equipment, electrical equipment, mechanical equipment and computational equipment along with the redesigning of the curriculum through seminars have strengthened and increased the quality of teaching. This has also benefited approximately 5,000 students and up to 1,200 teachers.

In regards to construction and remodeling of the Basic Cycle Schools: benefits are beginning to be perceived in several locations; students are utilizing the additional classrooms prior to the completion of the schools. This is due to the great increase in enrollment. Currently the enrollment is growing faster than the ability of the Government to construct classrooms.

The arrival of Loan outputs at selected areas around the country has begun to affect the 466,000 students and 25,000 teachers within the country of Panama.

21. UNPLANNED EFFECTS

None.

22. LESSONS LEARNED

Under this Loan A.I.D. has been placed in a series of very difficult positions which could have possibly been avoided or lessened if addressed during the design, or planning stages of the project.

1. Prior to the involvement by A.I.D. in any type of "reform" program, the individuals involved should be aware of all possible repercussions. Reform cannot be imposed by a Government or other institutions. The responsible parties must market and sell the ideas, changes, strategies, etc. to all involved. Institutionalization is the key but social change and institutional change are very difficult to achieve under any circumstance.

2. When a project includes a tremendous amount of equipment and material purchases, it could be useful for A.I.D. and the host government to retain a percentage of final payment until all materials, equipment, furniture, etc. have been delivered and properly installed. This would help to prevent the lack of concern or response to improper distribution and installation of equipment on the part of the contractor.

23. SPECIAL COMMENTS OR REMARKS

None.