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EVALUATION REPORT  
ON AID-SUPPORTED PROGRAMS TO IMPROVE  
PRIMARY EDUCATION  
IN NORTHEAST BRAZIL  
1962-1970

Prepared for  
Agency for International Development

American Technical Assistance Corporation  
1725 Eye Street, N.W.  
Washington, D.C. 20006



**AMERICAN TECHNICAL ASSISTANCE CORPORATION**

February 8, 1971

Mr. Herman Myers  
Chief, Division of Evaluation  
ARA-LA/OPNS  
Agency for International Development  
Washington, D.C.

Subject: Evaluation of Primary Education  
Program in Northeast Brazil  
Contract No. AID/LA-649 (Regional),  
Task Order No. 1

Dear Mr. Myers:

There is submitted herewith in draft form, in conformance with the task order cited above, our evaluation of the Primary Education Program in Northeast Brazil. We shall be glad to meet with representatives of AID to discuss the report before preparing it in final form.

It should be noted that our evaluation does not deal with two aspects of importance that were specifically excluded from our scope of work as impractical within the time and fund limitations determined. These aspects were (a) unit costs in terms of educational output (student achievement); (b) evaluation of the potential benefits of new technology or innovations to improve the quality and lower costs of elementary education. Some brief comments on these two aspects based on our experience in Northeastern Brazil may be helpful.

With respect to unit costs, we observed that the SUDENE/AID program had not been designed to focus attention on this problem. Nonetheless, the program played a role, directly or indirectly, in the introduction of many new elements (e.g., teacher supervision, training programs, new curricula, systems of automatic promotion) which have a bearing on it. There have been no studies of the effectiveness of these new elements except one study of lay teacher training, which indicated that there was no observable impact of the training on student achievement and therefore no beneficial effect on unit costs. This single study, however, is not a basis for generalization. Many of the new developments are probably

*a'*

productive, not necessarily in all situations, but at least where they have been most effectively applied.

It would appear important at this point, if cost/effectiveness analysis is to play an important role in the Second Sector Loan program, that a full study of unit costs be made. In our view such a study should particularly aim at producing the following results:

- a. Developing for continuing use a practical methodology for measuring unit costs in terms of output (e.g., student achievement). (An important reason why methodology must be worked out with sophistication is the increasing introduction in Brazilian school systems of systems of automatic or semi-automatic promotion. Such systems could as much as double the number of students completing grades for a given investment, but it does not necessarily follow that unit costs will be halved in terms of real student achievement.)
- b. Determining the present and potential effects on unit costs of new or recently introduced policies and techniques (including those resulting from the SUDENE/AID program).
- c. Suggesting areas in which the greatest potential for improving unit costs may lie. This can be important not only for program planning and administration but also as a factor to be considered in the design of research and experimental projects contemplated by the new program.

There are various ways in which the problem of unit costs can be approached. One way, which seems to us least economical and satisfactory, would be to study unit costs as a distinct project. In our report, we suggest in Recommendation 3 (p. 31) that the problem be tackled initially as part of general management surveys in selected states. Since a key element in any effective management survey would necessarily be the study of unit costs, the linkage we suggest is logical and the unit cost data that would be produced should be of greater depth and quality than might otherwise be feasible.

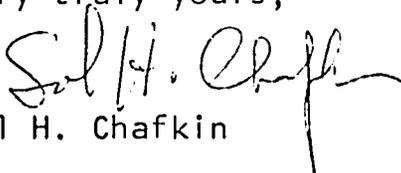
With respect to the study of new technology or innovations, we noted in the course of our evaluation that an extensive system of ginasio instruction through closed circuit television has already been introduced in Maranhao and is being expanded to cover 40,000 students. It is also a matter of high interest to the other Northeastern States as well as to SUDENE. A study of the present and potential benefits of ETV would appear to be

of basic importance to the planning and review of Second Sector Loan programs in Maranhao and other states that may wish to apply it. ETV and radio were also suggested to us repeatedly by educators in the Northeast as fields in which technical assistance from the United States would be particularly desired.

Another innovation that we believe it would be desirable to consider is printed programmed texts for classroom use. This might provide a means for significantly improving output in the one-teacher schools which predominate in the Northeast school systems and which, since they frequently do not offer courses beyond second grade, contribute heavily to the high rate of "dropout". Programmed texts may also be useful in larger schools if current experiments in automatic promotion, age-grouping, and the like, which are resulting in many teachers having to teach students at several different levels in the same classroom, are more widely adopted.

A recommendation for an evaluation of the potential for use of modern technology and innovative methods is included in our evaluation as Recommendation 6 (p. 33).

Very truly yours,

  
Sol H. Chafkin

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## INTRODUCTION

This evaluation covers all of the programs in furtherance of elementary education in Northeast Brazil supported by the U.S. Agency for International Development during the period 1962-1970. Since the bulk of activities were conducted in association with the Superintendancy for the Development of the Northeast (SUDENE), the activities as a whole are sometimes referred to for convenience as the SUDENE/AID Program.

The evaluation is based upon a study made in Brazil by a five-man team organized by the American Technical Assistance Corporation, pursuant to its contract with AID. The team was in Brazil during the period November 6 to December 18, 1970. During this period it visited the USAID offices in Rio de Janeiro and made a field survey in the Brazilian states of Bahia, Maranhao, Pernambuco and Piaui and briefer visits to Alagoas and Paraiba. In population these six states account for 89% of the population of Northeastern Brazil and roughly 64% of program expenditures.

The evaluation team consisted of the following:

William H. Rusch, American Technical Assistance Corporation (team leader and program evaluator)

Dr. Thomas M. Cooke, American Technical Assistance Corporation (program evaluator)

Dr. Malvina McNeill, University of Bridgeport, Connecticut (educator and specialist on Brazilian education)

James K. Muskelly, State Department of Education of Tennessee (expert on school administration and supervision)

Donald Holsinger, Stanford University (educator/sociologist)

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For all members of the team the American Technical Assistance Corporation desires to express appreciation for the helpful information and assistance provided by SUDENE and the State Secretaries and Secretariats of Education of the states visited; to Mr. Robert J. Ballentine, Deputy Director, USAID/B and Dr. Walter Adamson, Chief of the Human Resources Section, USAID/B, Rio de Janeiro and members of their staffs; to Dr. Donor M. Lion, Associate Director, USAID/NE and Dr. Alfred Bissett, Chief of the Human Resources Section, USAID/NE, Recife, and members of their staffs; and to Mr. David A. Cohen, Evaluation Section, USAID/B, Rio.

A particular word of appreciation must be reserved for the Brazilian members of the education staff of USAID/NE, who were as uniformly competent as they were consistently helpful.

## PART ONE: SUMMARY AND RECOMMENDATIONS

### I. GENERAL FINDINGS

#### A. Program Objectives and Design

1. The primary objective of the program was to achieve immediate impact in demonstrating the interest of the Alliance for Progress in Northeastern Brazil. Accordingly, the central design was a three-year action program for the rapid and extensive construction of primary schools throughout the area.

2. The program was not designed to concentrate on long-term needs for qualitative improvement of public education in the area. Principal deficiencies were:

a. Lack of any explicit goals as to the extent of qualitative improvement to be achieved.

b. Lack of research and experimentation to develop and test the most effective means of improving the quality and relevance of public education.

c. Limitations of the program design in institution building of the State Secretariats of Education, particularly in the following respects: (i) restriction of the program to the primary level of education; (ii) administration of the program essentially through temporary commissions terminating at the end of the program rather than through the regular organizations of the State Secretariats; and (iii) lack of projects to improve school system management.

d. Failure of the program to address the municipal school systems to which a majority of Northeast primary school children go.

3. Although the program was stretched out five years beyond its original term, no fundamental changes were made in program design other than to de-emphasize school construction. It must be recognized, however, that recent planning has been concerned with the design of new programs.

#### B. Program Results in Quantitative Terms

1. The program failed to achieve its objective of a speedy and massive expansion of school facilities in the Northeast. In terms of the major quantitative goal of classrooms to be built or renovated, the program sustained a shortfall of 81%. There were severe shortfalls in almost all other quantitative goals.

2. The primary reason for shortfall in program goals was rapid depreciation of cruzeiro funds (P.L. 480) used for program financing. Administrative problems, and delays and higher costs consequent thereon, were contributing factors.

3. The program's quantitative achievements were nonetheless sufficient to assure spaces for nearly 5% of children now enrolled in primary school in Northeastern Brazil.

#### C. Intangible and Qualitative Benefits of the Program

1. The SUDENE/AID program is widely recognized and appreciated as having marked and accelerated the beginning of a new era of progress in public school education in Northeastern Brazil.

2. Within the constraints of program design, the program contributed materially to strengthening the capabilities of

State Secretariats of Education, particularly in their Departments of Primary Education.

3. The program achieved some excellent results in participant training although there were areas of weakness.

4. The program had mixed success in development of training systems for teachers and other personnel. It did little to further much-needed improvement of normal schools. Projects for in-service teacher training and training of teacher supervisors were good. Projects for lay teacher training were questionable as to quality and limited in scope.

5. The program encouraged, directly and indirectly, much innovation in curricula and instructional techniques with considerable variance from state to state. However, there has not been an adequate approach to problem solving, and new innovations have not been tested for effectiveness.

6. The program made little or no contribution to improvement in the rate of student flow through the schools of the Northeast that is statistically discernible through 1968. Limited data available for 1969 and 1970 suggest that some progress is now beginning to be made and that a significant change in the statistics may be underway. However, as the main factor expected to contribute to this change is the adoption of automatic and semi-automatic promotion systems, the extent to which the change will be real in terms of learning achievement cannot presently be assessed.

#### D. Costs of the Program

1. The total resources expended on the program (equating cruzeiro funds to dollar equivalents at times spent) were about \$25 million, of which the AID component was \$21.7 million.

2. At least half of the funds spent are reflected in the value of buildings and other tangibles. These items are of generally good quality and are being well-utilized.

#### E. Conclusions

1. AID's investment in the program was advantageous especially considering the fact that the funds utilized were largely P.L. 480 cruzeiros, which would have become almost valueless if not used.

2. While there has been substantial improvement in many primary schools of the Northeast, there has also been a rapid growth of schools, often on a qualitatively poor basis. It is not possible to conclude that there has been more than marginal improvement in the quality of education from 1962 to 1970 for the average schoolchild in Northeastern Brazil. Neither the size of resources available to the program nor the program design was equal to the achievement of a revolutionary improvement in education in Northeastern Brazil.

3. The program has created a stronger base for the development and implementation of new programs.

## II. THE SHORTFALL IN PROGRAM GOALS

### A. Objectives of the Program

The SUDENE/AID program was conceived in the early 1960's as part of a broader AID program intended to demonstrate the intent and ability of the Alliance for Progress to do something about the economic and social problems of the area. The Northeast had long been the economically most depressed region of Brazil. Droughts in the late 1950's accentuated the problems, particularly of its predominantly rural population, much of which fled to cities to escape starvation. There ensued a climate of political unrest, and a focus of world attention on the area.

By 1961, the United States Government reached a decision to lend support to democratic elements through an AID program in what appeared to be a developing conflict with local and international communist forces. The action determined upon was to be speedy, massive, and highly visible.

The SUDENE/AID elementary program was conceived in these terms. At one point in the planning process it was proposed (Bohan report) to build enough schools and train enough teachers to increase enrollment of primary school-age children in the area from 30% to 100% over five years. This was scaled down to a three-year program which did not specify any particular goal - but in terms of number of classrooms planned to be constructed may be assumed to have intended to raise enrollment to around 50 to 60%.

The great emphasis of the program was on physical construction of classrooms. Schools were to be built in as many areas as possible where there were at least 100 primary school-age children out of school. Heavy emphasis was also placed on training teachers and on the building or strengthening of normal schools and teacher training centers to provide the expanded teaching corps to be required.

Education specialists of USAID/B tried as much as they could to build qualitative elements into the program. Provision was made for books, teacher supervisory systems, school kitchens and a variety of other items. Indeed, in the program agreements the need for qualitative as well as quantitative improvement was specifically stated. However, no goals were set as to the degree of qualitative improvement to be achieved. There could hardly have been any great hope that, with the speedy quantitative increase envisaged, it would be possible to do much more than hold the line on quality.

The overriding aim was to dot Northeast Brazil - a region about the size of the American South - with schools as symbols of the Alliance for Progress.

#### B. Failure of the Program Objectives

The program began with a flurry of building activity. The ink was hardly dry on the first program agreement before the first cornerstone was laid in August 1962.

From the very beginning, however, the program ran into heavy seas. The first state (Pernambuco) in which the program began elected a leftist governor and activities in this state

were stopped dead before programs in most of the other states had even got underway.

The ten State Secretariats of Education, the chosen executors of the omnibus program (one program agreement for each state), were small and ill-equipped to plan and implement it. The problem of getting all the states underway exhausted much effort. The mechanics were too cumbersome to accommodate both care and speed. The States had to make tri-monthly plans with complete program reviews. Plans had to be successively approved by Sudene and AID, which did not see eye to eye. Procedures of control that had been devised by AID became a bottleneck to be broken by compromise under pressure to commit funds rather than a guarantee of thoroughness. Construction of small schools, mainly one to three rooms, was rushed through hastily chosen builders at hastily selected sites in hundreds of often remote localities never before visited by state school officials.

Problems were further complicated by slowness in AID/Washington's appointment of consulting architects, who arrived after much construction had begun. Further AID gave to the consultant architects a broader charter than stipulated in the program agreements. The result was a welter of controversy in cities, towns and tiny hamlets all over the Northeast about details of construction among the consulting architects, numerous contractors, and the engineers and program administrators of AID, SUDENE, and ten Brazilian States. By the time one problem was solved apparently ten others became unstuck. The number

of people charged with varying responsibilities literally could not move from one location to another fast enough.

Meanwhile the political and economic climate of Brazil was steadily deteriorating. The program funds, largely provided in the form of a loan of P.L. 480 counterpart cruzeiros to SUDENE, were eroded month to month by inflation. Mounting controversies over construction led to increasing delays and rising costs, and it is hard to tell to what extent costs rose from inflation and to what extent from other factors such as excessive charges or more expensive construction requirements.

Soon it became evident that delays, inflation, and sheer administrative complexities were defeating the program's objectives. There was not only to be shortfall - the shortfall was to be immense. A huge program was deflating to modest size. Meanwhile, the Brazilian Revolution occurred in 1964. The Northeast was no longer to be a major battlefield of conflicting ideologies; its future did not depend on the outcome of the next elections. The original aim of speed was no longer considered pressing. The Northeast continued to receive a certain emphasis in AID programming, but it was no longer at the center of the stage.

Program administration reached a crisis point in the Spring of 1966 with the issuance of USAID/B audit reports containing numerous exceptions. An internal USAID/NE review of the program at the time began with the statement:

"This program is in serious trouble. USAID has been aware for some time of a series of problems; USAID audits now confirm these and other problems including diversion of funds.

"Little progress has been made since USAID has been concentrating its efforts on this program. By the end of July 1966, however, all but two of the projects will have passed their final contribution date. We can now either stop altogether or proceed on new grounds...."1/

Then later:

"It is not news that the goals are out of date. They have been for almost three years. During this period much of our fund releases have been reactions to Brazilian requests rather than attempts at affirmative programming...."2/

With SUDENE agreement AID decided to halt the program temporarily. About a year was spent straightening out problems and renegotiating all program agreements to reschedule use of unused funds to conform with what they could buy. Priorities for remaining funds were to complete work in process, emphasize non-construction activities, and concentrate any new construction on teacher training and supervisory facilities rather than classrooms. There was, however, no bold new strategy or initiative - only a regrouping of forces to finish the program in good order on a scaled-down basis. The program was stretched out and operated at a slower pace. What had been intended as a three-year program lingered on past eight years. On occasion small additional funds were added, and of course, the aggregate of participant training was much higher than would have been possible over the shorter term. As of this writing, the last of the funds are apparently committed but a small amount remains to be spent.

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1/ USAID/NE, Education Task Force Report, July 23, 1966, p 1.

2/ Ibid., p. 22.

### C. Extent of the Shortfall

The extent of shortfall in the specific program objectives may be most clearly seen in terms of the leading indicator - number of classrooms built or renovated. In comparison with 15,595 planned, only 2,941 were completed. In other respects, particularly items of low unit cost, the shortfall was less substantial. The complete record is presented in Table 1. (pp.14-15)

The essential reasons for shortfall were in summary:

1. Rapid inflation both during programming negotiations and program life. It is not possible to calculate how much purchasing power shrinkage occurred during the negotiating period as this varied from state to state. However, computing value of all funds at dates of signing program agreements (or other initial commitments), the purchasing power of all funds used was about \$59 million. Recalculation of dollar purchasing power as of dates funds were released bit by bit to States reduced the program size to about \$25 million (\$21.6 million AID component), and there was some small further shrinkage until the time funds were actually spent.

2. The original planning was probably over-optimistic as to what funds would buy - in part doubtless by underestimation of the inflationary factor but probably also from failure to provide for the higher costs involved in the higher building standards that were to be required.

3. The amounts of time required for constructing a large number of schools starting from scratch with site selection was underestimated.

4. The administrative mechanics of planning, operation and monitoring were awkward and the parties had neither the time,

previous experience, nor common approach to problems to enable them to work together speedily and effectively. A particular aspect was a great gap between local concepts of building and those of the AID consulting architects - with points on both sides.

TABLE 1  
ACTUAL ACCOMPLISHMENTS  
COMPARED WITH GOALS FOR ALL STATES  
(as of December 31, 1969)

	<u>Planned</u>	<u>Actual</u>	<u>Shortfall</u>	<u>Percent Shortfall</u>
Classrooms				
Built & Renovated	15,595	2,941	- 12,654	81
Normal schools				
Built & Renovated	47	9	- 38	80
Regional Supervisory Centers				
Built & Renovated	66	26	- 40	60
Teacher Training Centers				
Built & Renovated	22	10	- 12	54
School Kitchens				
Built & Renovated	50	600	+ 550 <u>1/</u>	+1100
Industrial Arts Shops	57	13	- 44	77
Medical-Dental Units	48	11	- 37	77
Equipment				
Sets of Classroom	15,595	5,996	- 9,599	61
School kitchens	2,950	1,701	- 1,249	42
Industrial arts Shops	57	5	- 49	86
Medical-dental	68	30	- 38	55
Normal schools	44	21	- 23	52

(continued on next page)

1/ This increase is apparently due to inclusion in actual accomplishments of kitchens built in new schools constructed. Note below that there was a shortfall in kitchens equipped.

TABLE 1  
(Continued)

	<u>Planned</u>	<u>Actual</u>	<u>Shortfall</u>	<u>Percent Shortfall</u>
Equipment (continued)				
Supervisory Centers	114	110	- 4	3
Teacher training centers	24	17	- 7	29
Vehicles	220	206	- 14	6
Training				
All personnel regardless of level	23,060	13,926 <u>1/</u>	- 9,034	39
Certified primary school teachers	N/S*	3,919		
Lay primary school teachers	N/S*	6,867		
Ginasio teachers	N/S*	998		
Supervisors	N/S*	653		
Primary school directors	N/S*	1,074		
Normal school teachers	N/S*	415		
Instructional Materials <u>2/</u>				
Children's Books	N/S**	138,269		
Teaching materials	N/S**	13,862		

\* Not specified in all states

\*\* Not specified in any state

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1/ These figures are aggregates of number of persons per course of usually one to three months duration.

2/ These figures do not include books supplied under the national USAID-supported COLTED program.

### III. WHAT THE PROGRAM ACCOMPLISHED

While the program failed to meet the goals expected of it, nonetheless there were important accomplishments. Accordingly, we now turn attention to what the program did against the broader picture of change in public (and especially primary) education in Northeast Brazil during the past eight years. In this we will endeavor to summarize the respects in which its effects were strong and those in which it was weak or non-responsive to needs.

To cover the ground more succinctly than in the more detailed evaluation that follows, we will consider the following questions:

- A. To what extent did the program improve the general climate for progress in public education in the Northeast?
- B. To what extent did it contribute to quantitative expansion of capacity and enrollment in primary schools in the Northeast?
- C. To what extent did it improve the institutions charged with public education in the Northeast?
- D. To what extent did it contribute to fulfillment of needs for trained educational manpower?
- E. To what extent did it contribute to higher quality instructional systems to improve output in terms of student achievement and relevance of learning?
- F. To what extent did it contribute to improved student flow through the school system?

#### A. Climate for Public Education

Even at the beginning of the program there was a receptive climate in the Northeast to expansion of public education. Universal education, though far from reality, was a widely accepted ideal. Public school enrollment had been expanding rather steadily to accommodate increasing proportions of the school-age population.

The SUDENE/AID program, however, was the first dramatic attempt to push ahead at a rapid pace and with a strong accent on modernization. For these reasons it is generally credited by educators and observers throughout the area with having marked the beginning of a new era in education. While they regard its quantitative achievements as small, they believe that it has provided the stimulus for new approaches to education and for other and continuing programs (Federal, State, and Local) to expand and improve education in the Northeast.

With development of strong Federal action to stimulate education, a new era in any event was doubtless inevitable. But, the SUDENE/AID program marked and accelerated the arrival of that era.

#### B. Quantitative Expansion

From 1963 to 1968 primary school enrollment in the Northeast increased substantially from 2,220,000 to 2,980,000 or 34%. This increase was substantially higher than the 14% total population growth of the Northeast during the same period. On this basis, while demographic details are lacking, it may be assumed that the percentage of primary school-age children in school grew considerably - probably from about 40% to 50%.

The SUDENE/AID program contribution to total expansion was significant despite the program shortfall. Schools constructed or reconstructed under the program probably accommodate about 140,000 students, or nearly 5% of current enrollment and 18% of enrollment growth. The program contributed some equipment also for schools with many more students. Schools and equipment supplied are of very good and suitable quality.

A point of great significance (to which we will revert in the next subsection) is that the major expansion of public primary education occurred in a sector completely unforeseen by the SUDENE/AID program and to which it addressed at most an indirect attention. This expansion, achieved through local initiatives with Federal support, occurred in the municipal primary school system, which grew from 1963 to 1968 from 976,300 students to 1,433,098 or 47%. Conversely, the State system, within which the program operated, grew from 865,569 students to 1,189,156 or 37%.

### C. Institutional Change

#### 1. The State Primary System

The SUDENE/AID program was executed through the respective State Secretariats of Education of the ten Northeast Brazilian States. Its chief concern in dealing with the State Secretariats was to assure effective planning and administration of the program. For this reason provision was made for establishment in each Secretariat of a full-time Special Commission to deal only with the SUDENE/AID program. The need for some sort of institution within an institution can be regarded as valid at the

time when State Secretariats were inadequately developed, largely staffed by poorly paid part-time employees. However, as an instrument of long-term institution building it was obviously not ideal. Files of USAID/NE indicate recognition during the course of the program of organizational complexities and duplication resulting from the Special Commissions. Further, while many personnel from the Special Commissions have gone into the regular Secretariat organization, the carry-over was uneven.

Another factor limiting institution building under the program was its confinement to primary education. The various levels of primary and secondary education are related and present many common problems and indeed many that must be dealt with by the same personnel. Though there was some carryover to other departments of the Secretariats of Education, what was done was not the strengthening of the Secretariats in the broadest sense; it was a limited form of institution building.

In terms of original program conception, this made sense (though it can be argued that the original conception would have been better if it had built schools in balance among primary and secondary rather than concentrating wholly at primary level). Following failure to come close to building goals, however, the program gradually shifted to a philosophy of strengthening state Secretariats as its major goal and achievement. If, however, building the institutions of State Secretariats became the major goal, the question arises why the program was not changed to reflect this as a basic strategy. At least part of the answer is reasonably clear: the program had sustained too much shock in its early years to mount a new initiative and in its later years

overlapped with the planning of new programs intended to supersede it.

Nonetheless, during the past eight years the Secretariats have undergone considerable development. They have grown by as many as eight times in size of staff with logical distribution of functions. Their physical facilities and equipment are much improved, to which the program made some very useful contributions. The fact that the Elementary Education Departments grew first is attributable to the program, and they are better developed than others. However, there was also a considerable expansion in other departments - to which the programs' contribution was only partial or indirect.

The State Secretariats were given much training and practice in the development of plans and program documents for the AID/SUDENE program. This has materially improved their capacity for planning programs financed by the Federal Government and for planning generally. The program did not, however, significantly address the problems of well-balanced overall planning of educational systems, including priorities by municipalities of types of schools (primary, ginasio and secondary) to be built in the orderly expansion of an educational system. The States, have, however, made some progress in this respect through assistance from SUDENE and MEC and their own initiatives. They need further help.

The overriding problem of all the State Secretariats, to which the SUDENE/AID program has made little contribution, is to establish effective management procedures. One aspect of this is the headquarters operations within the Secretariats;

however, probably more important, the problem extends downwards from the Secretariats to the administration of the school system - which is their greatest responsibility. Administration and control over the system is weak. There is serious deficiency in performance of local principals and in the support they receive in turn from the Secretariats. Small schools essentially shift for themselves (though some receive teacher supervision), and management at the Secretariats is not always well-informed as to whether a school is closed or why. Supervisory centers have been calculated within USAID/NE itself to have roughly only 10% of the supervisory strength needed, and their resources are so stretched and they are frequently so weakly supported that they are often of questionable value; in any case they are not organizations of regional management.

Deficiencies of management are, of course, most visible in the frequently noted lack of maintenance systems (or extremely inadequate ones) for the State schools. Deficiencies are less visible but almost equally pervasive with respect to other administrative matters.

The importance that States themselves attach to administrative improvement is apparent in various ways. For example, in a poll of State Secretariats conducted by USAID/NE concerning current needs for participant training, "general administration" was ranked as the greatest need. In the State of Bahia a new Secretary has been chosen specifically because of his strong background in public administration.

## 2. Municipal Schools

The SUDENE/AID program avoided - from conception to termination - dealing with the institutions which in 1962 as in 1970 account for the major proportion of public school enrollment - namely the municipal school systems. A major reason for ignoring them at the outset was apparently that some of them were controlled by political leaders with whom AID could not work. Even in diagnosing educational problems in the Northeast (e.g., a diagnostic survey in 1967) USAID/NE scarcely mentioned the municipal system and tended to misinterpret its role and significance.

The objection may be offered that it would have been impossible for the program to have worked with the Municipal system because of the problem of dealing with so many small entities. This would be to overlook the potentialities of working with them in the only logical way - through the State Secretariats. While the extent of State legal powers over municipal schools may be hazy, they are not negligible; the States moreover have substantial influence and are looked to for leadership. There has traditionally been a complex pattern of cooperation between State and municipal authority through a multiplicity of individual agreements. The SUDENE/AID program in fact did deal to some extent with municipal lay teachers; since there were not enough lay teachers in the State systems to train, target objectives could be fulfilled only by going to the municipal system. The municipal mayors also helped choose the sites for State schools in their territories and actually constructed many of the SUDENE/AID small town and rural schools - and in some

states are credited with having done the best job. Far from protesting the construction of state schools they welcomed it as a means of stretching or conserving their own limited financing. The municipalities further frequently contributed land and other resources, had considerable influence over selection of school personnel, and are sometimes providing some maintenance that is not forthcoming from the States. Thus in some measure they fill a part of the void in state system management.

There has, moreover, been a growth in State-wide leadership in recent years evidenced by such action as statewide meetings with mayors to change the school year in rural areas to avoid conflict with the farm season, agreements to upgrade quality of teachers, and new state legislation in Pernambuco looking to improved municipal school organization and standards. If future aims are to improve education globally in Northeast Brazil the rationalization of the State system with the larger municipal systems and the achievement of higher state-wide standards and efficiency in both systems are of key importance.

#### D. Manpower Training

The SUDENE/AID program achieved some excellent results with respect to participant training, though there were some areas of weakness. Participant training helped significantly to provide broader experience and background for many persons now occupying important positions in the Secretariats.

To the extent training was in the United States, it generally broadened horizons and gave participants new ways of thinking. At the beginning of the participant training program, we were told,

there were fears of "brainwashing" but this concern has disappeared. Many of the participants sent to courses in the United States were too poorly prepared in English to profit greatly. The sending of many normal school teachers to the United States undoubtedly benefited recipients, but has not produced the major reformation of normal schools which almost everyone agrees is necessary in the Northeast. State Secretariats agreed that the training at PABAEE in Belo Horizonte was excellent and is more useful for most personnel than training in the United States.

While the upgrading of personnel in the Secretariats was the most important value of the participant training, we believe that there was inadequate follow-through in technical assistance on the job to optimize results. Theory and observation is one thing; their practical application in a management situation by personnel with basically pedagogical background is another. This applies not only to individual job performance but perhaps even more so to ability to get things done across organizational lines. For example, Primary School Departments are well aware of deficiencies of the normal schools that supply their teachers but either do not or are not able to apply leverage to get any action from Secondary School Departments. Again, there are personnel with considerable capabilities in curricula preparation; however, they do not appear to press for changes in the basic curricula (e.g., level of difficulty) but rather to prepare new curricula documents to serve what tends to remain the old curriculum.

With respect to the training of teachers and school principals, the SUDENE/AID program has initiated some useful programs but was not organized to take a problem-solving approach - carefully assessing needs, proposing solutions to meet them, and testing them in cost/effectiveness terms. The program has had no significant impact to make normal schools more practical and relevant. The need for a strong technical assistance project for long-felt normal school reform was once suggested but nothing was done about it. The program instituted in-service training programs for certified teachers that are very well conceived and are being continued by the States. Some training of school principals has also been provided, but in the absence of good management systems, results are hard to measure. The training of supervisors appears to have been good to excellent.

The most difficult training problem to evaluate is that concerning lay teachers, most of whom have four or less grades of education. These have now grown in number from 45,000 to 52,000, mostly in the municipal system. The only evaluation made of such training was on the basis of 60-day courses for lay teachers in one State. The result showed little difference in achievement between students of teachers with training and those without; in fact, the latter had a higher promotion rate. Some longer training programs have subsequently been instituted. In our judgment, however, they require considerable technical improvement. Further, facilities available do not appear sufficient to make major inroads on the problem. If training is to be extensive (e.g., equivalent to an academic year) it is doubtful that present

facilities could much more than keep up with the influx of new untrained teachers. Training of lay teachers appears to work best when joined with supervision; however, as noted above, the supervisory system is too small and fragmentary for the task.

There has been a continuing need for study of supply and training of the school corps (teachers, supervisors and principals) to develop systems of greater effectiveness relative to needs and costs. This should include a study of personnel measures (such as recent actions by some states and municipalities setting minimum requirement of ginasio qualifications for teachers in state schools or municipal systems to which the state contributes support). Such measures may redress the problem more than training and supervision and make the latter more effective.

#### E. Instructional System

There has been widespread acceptance of the need for change to develop an instructional system of higher quality and greater practicality. This can be attributed very substantially to the SUDENE/AID program in training of personnel, continuous encouragement, and some technical assistance through the provision of Brazilian technicians for fairly long periods and spot assistance by USAID/NE staff.

The difficulty with this approach is that it places almost complete reliance on the proposition that, if you train people, they will ultimately find solutions. This does not necessarily follow where the problems are highly complex - as is true with

instructional methodology in Northeast Brazil; where there is great need for intensive research and systems analysis in problem-solving, which the personnel have neither sufficient experience nor time for; and where some fundamental decisions must be reached by top management (the Secretaries of Education) on the basis of carefully interrelated proposals that cross the jurisdictional lines of various offices of the Secretariat.

A variety of innovative measures has been taken by the Northeastern States in such respects as development of more elaborate and detailed curricula; preparatory courses for school beginners; grouping of children by age group; automatic or semi-automatic promotion and grouping by ability; recuperative classes for failed students; greater utilization of textbooks (with moderate but highly useful assistance from SUDENE/AID and national AID-supported COLTED program); greater emphasis on teacher work plans; new approaches to discipline; and improved enrollment planning procedures.

Most of these innovations have taken place in the past two years and are not yet widely implemented. Their results have not been demonstrated and many are highly controversial. The level of difficulty of curricula has not basically changed and the possibilities of achieving curriculum objectives with three to four hour school days is dubious. The relevance of curricula has improved in some respects, while other materials strange to the experience of students have been included; the question of adaptation for rural students remains an open one. Grouping by age and ability is complex even in large schools; it has

limited possibilities in the small one to three classroom schools that predominate in the Northeast. Book utilization remains uneven, and use appears to be proportionally less in classes taught by lay teachers. Further the new approaches are spreading only slowly through the schools owing to a variety of factors, including of course, a lack of strong school system management and control.

While there is merit in encouraging each State Secretariat to develop solutions to basic instructional problems, there would also be merit in concentrating some efforts within one or two states to achieve a decisive breakthrough. Sole reliance on a diversified approach has not yet developed clear patterns as to what instruction methods will work best or under what conditions.

#### F. Flow-Through

Comparison of statistics for 1962 and 1968, indicates that there was substantially no improvement in the rate of flow of Northeastern students from the first to the second grade between these years. Three states actually lost ground, and average performance was the same as nearby states which were not recipients of SUDENE/AID assistance.

When statistics for 1970 or 1971 are available, they may begin to show some significant improvement in the flow-through rates. To some extent this may be the result of the program actions recently reported to AID/W by USAID/B as the SUDENE/AID program's responses to ten problems identified as contributants to slow flow-through. We do not see any reason, however, to

anticipate that changes as a result of these actions will be any more rapid than they were in preceding years. The basis of our expectation of a significant change in the statistics is for a different reason - namely the recent spread through the Northeast states of the concept of automatic or semi-automatic promotion.

While automatic promotion may improve flow-through, it may also cause other problems in terms of level of student achievement. It is a development of great significance to which considerable attention should be given. The concept of automatic promotion is one to which the SUDENE/AID program has contributed through participant training, but program administration has apparently taken no specific action or position on the matter.

## IV. RECOMMENDATIONS

### A. General Comments on Second Sector Loan Approach

The purpose of evaluation is to develop information that may be useful for the planning of future programs. In this case a new program activity is contemplated in four of the Northeastern States (to be selected) under the Second Sector Loan program. It appears most useful for us to make suggestions, based on the results of our evaluation, in the context of this new program.

Before doing so, we should like to observe that many points we might otherwise suggest have already been incorporated in planning documents for the Second Sector Loan. Features of this new program that we particularly commend are the following:

1. Concentration on a limited number of states rather than dispersal of effort.
2. The provision of substantial resources for research, experimentation and technical assistance that can deal with fundamental problems of the educational system.
3. The requirement that states establish measurable goals for improved output.

### B. The Recommendations

The following specific recommendations, drawn from experience with the SUDENE/AID program and related observations on the current status of public education in the Northeast, are made for the consideration of AID and USAID/B in further programming and implementation of the Second Sector Loan program. The recommendations are entirely substantive in nature and are

identical to those that we would make to the Ministry of Education of Brazil if it were our client.

#### RECOMMENDATION ONE: Municipal Schools

The program should broadly apply to improvement of quality of management, instruction and output of all public schools, municipal as well as state. This proposal is not intended to preclude special attention (e.g., in construction) to priority municipalities. It is intended to suggest that State plans should include provision to assist municipalities generally in the achievement of higher school standards and in better utilization of the substantial resources they devote to education; and to assure that municipal systems benefit from research conducted under the State plans.

#### RECOMMENDATION TWO: State Program Administration

The program should take a total approach to institution-building in improving the capabilities of the Secretariats of Education to meet efficiently their responsibilities in public education. Thus to the greatest degree possible the program should seek to strengthen and work through the permanent organization of the State Secretariats rather than through temporary Special Commissions or other mechanisms established purely for conduct of the program.

#### RECOMMENDATION THREE: Management Assistance

Participating states should be provided with direct assistance in the development of comprehensive management systems for public school administration. A desirable first step would be the

conduct of a management survey in one or two states, which could serve as models for replication in others. The survey should cover the following key points: (a) internal operations of the State Secretariat; (b) management and control of the State school system and its constituent units; (c) management guidelines for municipal school systems; (d) the coordination of the State and municipal school systems; (e) design of an effective management information system; and (f) cost-effectiveness analysis including the development of methodology for determining unit costs in terms of system output or student achievement.

RECOMMENDATION FOUR: Training of the Teaching and School Administration Corps

Comprehensive analysis should be made of the operations of all institutions for training of teachers, supervisors, and school principals in participating states. This analysis should be a sub-system approach covering normal schools, supervisory centers, training centers and other programs to study alternatives in terms of cost-benefits to improve the preparation and in-service training and performance of the entire educator corps. A special feature of the analysis should be to study and assess all feasible techniques in terms of cost-effectiveness in dealing with the "lay teacher" problem.

RECOMMENDATION FIVE: Improvements in the Instructional System

Technical assistance should be provided to assist participating States in the development of research - and as desired, experimentation - on the following matters:

- a. Factors affecting school attendance, learning ability and school progress of school-age children in urban (and particularly poorer) areas and means of improving instructional

techniques to meet them. This would include a study of the effectiveness of new educational techniques introduced in recent years, including new curricula and automatic promotion.

b. A similar study with respect to rural children. This should be coordinated with studies made in Recommendation Four above with respect to the lay teacher problem.

c. The development (taking into account the results of a and b above) of new and more relevant curricula conforming to national guidelines for fundamental education.

Again, such research and experimentation may initially concentrate on one or two bell-wether states.

#### RECOMMENDATION SIX: Study of Potentialities of Innovative Techniques

An evaluation should be made to determine the potentialities of use of programmed learning, radio, and ETV. This should include a study of all experiments conducted to date. This recommendation is a matter of urgency as well as importance. By 1974, as many as 40,000 ginasio students are to be educated through ETV in Maranhao alone. Evaluation of such programs and the possibility of technical assistance for them will be essential in the formation and consideration of State plans under the Second Sector Loan agreement. Programmed learning should be studied not only in connection with radio and ETV, but also in simple terms of programmed texts suitable for teaching situations in which members of the same class are studying at several different levels and for possible simplification of the lay teacher role.

#### RECOMMENDATION SEVEN: Special Regional Needs

Consideration should be given to the encouragement of a regional education program through SUDENE to deal with special problems common to the Northeastern States. Such a program can address such matters as regional meetings and training;

development of regional use of radio and ETV; research into educational problems typical of the Northeastern States; and fostering of the production of readers and other texts dealing with the area and of the contribution of Northeastern educators to the educational literature of the country as a whole. (SUDENE's education staff has been carefully developed in recent years and its program of regional educational activities has gone considerably beyond participation in the program reviewed in this evaluation. Its continuing activities require careful definition to complement rather than duplicate or conflict with programs administered at the national level.)

#### RECOMMENDATION EIGHT: Establishment of Goals (Targets)

Consideration should be given to the setting of goals under the Second Sector Loan Program on the following bases:

##### a. Enrollment

A quantitative goal can be set on overall enrollment of 7-14 year olds (primary plus ginasio age) as a "milestone" on the way to achievement of the MEC objective of 80% enrollment. Subsidiary quantitative goals can be set regarding 1) accommodation of over-aged children; 2) speed of enrollment build-up for schools to be constructed under the program; and 3) colegio enrollment by field of instruction.

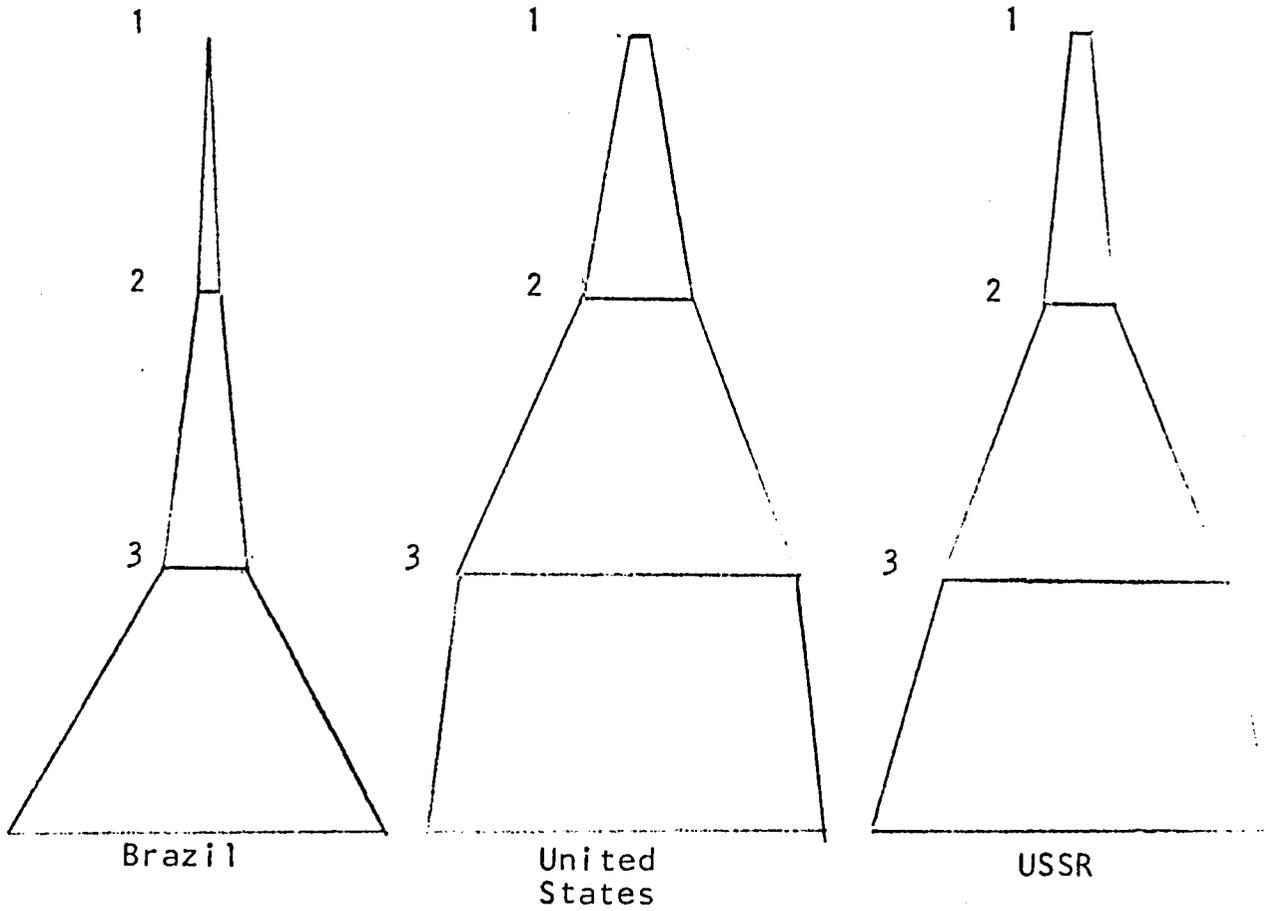
##### b. Flow-through and achievement rates

Goals can be set as to the rate of flow of children through the schools and the levels of achievement to be expected of them. We suggest that these goals be set essentially in the form of a pyramid with the first grade forming the base and the last year of the colegio the apex, such that a State will commit itself to a realistic and achievable distribution of students by grades. The goal should be supplemented by annual achievement testing to assure that progress is made in improving the pyramid without substantial impairment of average achievement at the respective levels.

If the program is concerned only with bringing about improvement of the State school systems (and certain municipalities allowed to participate) then goals should be established that are solely relevant to such systems. This requires different goal-setting and measuring approaches since changes in the State system must be isolated and measured independently of the larger system that surrounds it. (See Appendix III.)

Chart I on the following page contains illustrations of pyramids showing distribution by school level in different countries. Pyramids for most Northeast Brazilian States based on current distribution would closely resemble that for Brazil as a whole.

CHART .1  
Student Flow through in Brazil, United States  
and the Soviet Union



1. University Enrollees
2. Secondary Graduates
3. Primary Graduates

## PART TWO: CONDITIONS FACED BY THE PROGRAM

### I. ECONOMIC AND SOCIAL FORCES

#### A. General Description of Socio-Economic Conditions

Northeast Brazil covers a territory about the size of the American South including Texas. The population in 1963 numbered 23,500,000, which has grown by 1970, owing to a high birth rate and despite considerable migration to other regions, to some 27,300,000.

Along the littoral of the Northeast lie the major cities, such as Recife and Salvador, which are the centers of culture, commerce, and industry. They are also, with the single exception of Piaui, which has an inland capital, the seats of state government. In appearance this chain of cities shares much in common with urban Brazil to the south.

Certainly in 1963 the Northeast cities lagged considerably behind the more advanced south in living standards and in employment opportunities. With rapid progress in industrialization, promoted by the combined efforts of the federal government, SUDENE, and the states, the margin of difference has significantly narrowed. Nonetheless, a large minority of the growing population remains illiterate, lives in substandard housing, and is unemployed or works at minimal wages. Some 74% of Northeast workers each earned under NCr\$30 (US \$8.00) weekly in 1968, compared with only 50% in the south of Brazil. In contrast to this there is in almost every field a continuing shortage of trained and skilled manpower.

It is behind the littoral in the interior of the region, however, that the real problem of Northeast Brazil emerges. This is a vast area of tropical agriculture beset with problems and poverty that do not yield to ready solution. For the most part landless, the inhabitants, largely of Portuguese, African and mixed stock, eke out a bare existence as part-time agricultural workers, sharecroppers, and subsistence farmers. Typical rural dwellings are small mud huts reminiscent of Africa and India. Outside small cities and towns, which serve as local centers of trade and government, there are few if any amenities; many live beyond convenient reach of road transport.

Even in the small cities and towns there is a paucity of cultural resources. Newspapers are rarely in evidence; libraries, where they exist, are poor and little utilized; and such vendors of reading matter as can be found are likely to display only a mediocre range of largely out-of-date periodicals. Radio coverage is good, together with TV in areas within reach of the stations in major cities.

Throughout a large part of rural Northeast Brazil, economic problems are compounded by droughts, interspersed by floods, in most years localized but periodically of major expanse. Officially the drought area constitutes about two-thirds of Northeast Brazil, though some parts are usually only marginally affected. During a drought year a large portion of the population will abandon their homes for the cities and other areas; many do not return but the majority do. Even outside the drought area, rural opportunities are limited. In the entirely rural State of

Maranhao, for example, which lies almost wholly outside the drought area and which is growing rapidly in population through migration as well as natural births, per capita GNP is stated to be under \$100 per year compared with \$360 for Brazil as a whole.

In overall statistical terms, the plight of Northeast Brazil can be seen from the fact that in 1968 its per capita income was only 57% that of the rest of Brazil. Yet there has been substantial progress. At the commencement of the educational program in 1963 the corresponding figure was only 45%; as long ago as 1950 it stood at 38%.

Most of the progress has occurred in the urban areas of the littoral, where population growth is faster, largely through the process of industrialization. The problem of the agricultural worker in the interior remains the greatest unsolved economic problem in Brazil. Yet, there is evidence of growth and industrial development of budding urban centers in the interior, particularly those situated on major highways. These growing centers act as poles of attraction for rural youth that are more immediate and frequently more appealing than the coastal cities or the more distant south. Both in economic and social terms, growing urbanization of the Northeast interior may offer one of the best hopes both to drain off surplus rural population and to provide greater support and service to the rural economy. One of the features of current Brazilian Government planning is to concentrate attention on municipalities (counties) which are considered to have superior growth prospects as centers of economic development.

This brief description of the economic and social conditions of Northeast Brazil provides a backdrop against which to consider some important points relative to the educational problems with which the SUDENE/AID program has had to deal.

B. The Northeastern School-Age Child

The first of these points is that the program operated in an area characterized by children from extremely deprived backgrounds in both economic and social terms. It is necessary to be clear about this to avoid the tendency to assume that the development of reasonably good schools, teachers, and school programs will fully solve the educational problem. The problem must also be viewed from the standpoint of the child--and the response he can make to educational opportunity.

Even with ideal school facilities, the majority of children will enter school ill-prepared for the experience and with at best marginal support from their family backgrounds. Further, the closer the Northeast progresses toward universal education, the greater will be the increment to the school system of children from the most deprived backgrounds.

During the course of our evaluation we found no research specifically directed at the learning ability of or problem of teaching the underprivileged child either from urban poverty areas or from interior farm areas. It was, however, possible to learn something of the scope of the problem. In some cases teachers told us that many students couldn't learn and nothing could be expected of them. This is a harsh way to put the case

and does not speak well for teacher motivation; other teachers put it more gently that students from poorer backgrounds had a very hard time. In some rural schools we were told that the first half of the first grade was used to accustom the children to the strangeness of a social environment, and that very little instruction could be provided before the second semester. In one state we were told by a responsible observer that achievement levels in the interior between children passed and children failed was often so small that it was unclear how the teachers could distinguish between the two groups. We allow for probabilities of overstatement; the dimensions of the problem are clear.

In many areas our observation of the children suggested serious malnutrition which presumably dated back to infancy and which in some cases may have been accompanied by sufficient protein deficiency to have impaired learning capability. Medical surveys indicate that large numbers of children suffer from various maladies, with the great majority infested by one or more parasites. In one state a survey had been made showing that 12% of students suffered from visual defects, which an almost total absence of glasses among schoolchildren would indicate went uncorrected;<sup>1/</sup> in other states we found no evidence that this was recognized as a possible problem. The same survey indicated that 6% suffered from serious physical or mental problems.

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<sup>1/</sup> In Maranhao it was indicated that the Lion's Club is giving attention to this problem, as it does in many countries.

### C. The Child, the Family, and the School

What is the relevance of education in the context of life in Northeast Brazil? To begin with schools are immensely popular. Although compulsory education is nowhere enforced, schools are overcrowded and many children are turned away for lack of space. Thus, the schools are obviously fulfilling a want.

We were unable during our evaluation to find any studies which deal with motivation in school-going either in urban or rural Northeast Brazil. From our conversations (largely with teachers and other secondary sources), however, emerges a picture not unexpectedly similar to other developing countries. The usual reason given for sending children to school is economic--to prepare them for better jobs. This is often expressed in the rural areas in terms of enabling them to escape from the harsh conditions of life of their parents. As indicated above, the focus of hope may be very immediate in terms of the "next step up"--to get a job in the nearest town or small city driving a truck or clerking in a store. Parents who are already "one step up" are likely to focus, if not on some higher goal for their children, certainly on maintaining the socio-economic advantage that has been achieved. Love and pride, of course, are important motivations in desiring to push a child ahead in life; but often (and certainly in rural areas) this is allied with the concept of the child as a support in later years--a support which can be the more valuable if he achieves higher economic status.

The near universality of economic motivation in sending children to school should not, however, lead to illusions as to the strength of that motivation. It is strong as steel in the middle and top of the social ladder, where parents are generally determined at all costs that their children get an education. At the bottom there is not the same determination and continuity of purpose. Aspirations are vague and the problems of day-to-day subsistence dominate over hopes for the distant future. There is little sense of urgency in sending a child to school at age seven; thus many start school over-aged. If a child wishes to drift away from school, parental control is unlikely to stop him. If he can do any kind of work that will bring in money, the family will likely put a higher value on this immediate economic benefit than on the deferred and uncertain benefit of school-going. In the cities many children work long hours in various service jobs and give this as reason for not attending school. In the rural areas students are taken out of school in great numbers to help on the farm during farming season--often as early as ages 7 and 8. In rural areas also distance to school and lack of transport contribute to deferring school entry, as well as impairing regularity and continuity of attendance. Strength of family relationships, however, is a plus for education; children are often sent to live with relatives living near schools so that they can attend, particularly at secondary school levels.

Another important economic motivation for school attendance, if we can rely on the experience and apparently unanimous judgment

of teachers and school administrators, is the school lunch program.

While economic motives are most frequently cited as reasons for school attendance, it is apparent that social prestige is a complementary factor. Even a minimum of education enables a person to state his qualifications as "primario" (elementary school); this is a distinct social advance over "unalfabetizado". Then, too, children in Brazil like to go to school for the same reasons as children elsewhere--it is something to do in an environment that offers few alternatives and a place to meet friends of their age-groups. For some there is the satisfaction of excelling, for others there is substantial discouragement in the high failure rate.

Some teachers with whom we talked drew a distinction between educational motivation in the first grade compared with succeeding grades. They said that in the first grade the child came to school because his parents sent him and, in consequence of weak parental motivation or discipline, attendance would be poor and drop-outs frequent. At the second grade level, however, they felt there was a shift toward the child himself providing the motivation and undertaking the responsibility to come to school. This is an important point on which it would be desirable to learn more; if there is to be a decisive breakthrough in education in Northeast Brazil, it must come through reaching and motivating the child as much as from the mere extension of educational opportunity.

#### D. Educational Needs for Development

Educational needs for development of the Northeast do not appear at any point to have been well defined. Certainly a major problem has been a shortage in the urban areas of skilled workers, technicians and middle management in almost all fields. The region was short in these talents in 1962. In light of rapid advance of new industry, sparked in large measure by SUDENE with tax advantages and other support from the Federal Government, these needs are even greater today. The needs are not alone in industry but also in Governmental and service fields that have been growing at a comparable pace.

The importance of these needs has been to some degree tempered by the possibilities of bringing highly trained people to the Northeast from other areas of the country. However, this solution has two critical drawbacks. First, it obviously does not accord with aspirations of Northeasterners to reap the rewards of regional development. Second, there is limited propensity of people from the South to move to the Northeast.

A secondary but nonetheless important need in the urban Northeast is for intelligent unskilled and semi-skilled labor. At this level a high rate of literacy and arithmetic skill is useful in competing for industry with other areas of the country.

While in the early 1960's urban development in the Northeast could be conceived essentially in terms of the large coastal cities, there is an increasing emphasis on developing new urban centers more in the interior of the country to relieve pressure

on the major metropolitan areas. Recent highway construction has made good progress in opening up the interior and making such development possible. Certainly the successful evolution of these interior centers to importance will depend heavily upon the quality of human resources they will have at all levels.

This leaves to be considered the rural population of the interior. Is it useful to educate in the rural areas and, if so, how deep into isolated rural communities is it worth while to try to make the school system reach? What are the children to be educated for? Should they be taught the same things as city children? Should the curriculum be made more relevant to conditions of rural life?

These are questions which seem to be too little raised or to which, if any answers have been formulated, they have not been generally accepted. In the 1950's an extensive network of rural schools with a special program was established in Pernambuco. The experiment, which is extensively documented, was considered by many educators to have been successful. However, it was abolished with a change in state government.

The socio-economic situation of the rural Northeast has been identified as the most desperate in Brazil and one of the most desperate in the world. This produces alternative pressures to do something and reactions that the problem is too difficult to provide a rewarding return on the use of scarce development resources.

There are, in practical economic terms, two reasons why education in the rural interior is important and deserves (today as in the early '60s) some emphasis in Brazilian and AID programs.

These are the following:

1. A major problem of the rural area of the Northeast is that there is little hope that the land can adequately support, given the most optimistic expectations, anything like the present rural population, let alone the substantial increments to be anticipated from unchecked natural growth. Accordingly, solution of the Northeast's problems in a context acceptable to overall national development depends heavily upon a consistent and orderly egress to other areas--whether to urban areas of the Northeast (including interior poles of development) or to the poorly populated North, or to the more prosperous south. Education should, therefore, be frankly conceived as an instrument which can prepare a sizeable proportion of rural Northeast youth to make the transition to other areas as intelligent and capable workers.

2. To the extent people remain on the land, the success of programs to assist them to improve their productivity and way of life will depend substantially on their ability and motivation to take advantage of such programs. This in turn has a relationship to education which can be demonstrated on more than theoretical grounds. For example, when agricultural credit is available, farmers who can sign their names are the most likely to get it. Many observers feel that at bottom the problems of the Northeast farmers are that they do not have sufficient education to recognize needs for assistance, to press for it or to utilize effectively assistance given. A major reason for delay in land reform in the area is an apparent conviction that the population does not have the capability of making effective use of land that might be redistributed.

Finally, it remains to be pointed out that the chain of events that led to the Northeast education program under review began with the droughts of 1957 and 1958 and the world attention that was focussed on the victims of these droughts. Yet those who suffered most have received modest benefits from the SUDENE/AID education program, particularly with the shift of its emphasis towards cities and towns. To whatever extent a claim of conscience motivated the original program, it remains largely unredeemed.

## II. THE EDUCATIONAL SYSTEMS OF NORTHEAST BRAZIL

### A. Description of the Systems

At this distance of time it is somewhat difficult to draw a precise picture of the condition of education in Northeast Brazil during the program planning and negotiating years of 1961-63. During the hectic months in which the format of the program was set (late 1961 and early 1962), AID administrators themselves had precious little time to make a full analysis while simultaneously coping with the pressures to develop a program quickly. From a variety of sources, both written and oral, however, the following picture can be pieced together.

Education in Northeastern Brazil has consistently followed the same pattern as the rest of the country but at a slower pace of development than the more prosperous south. Until the 1964 revolution there was little direct intervention by the Federal Government in the primary and secondary systems. It did, however, establish some guidelines, which presumably helped to maintain a general comparability in the systems among the various sectors

of the country. The contours of the educational system were the same in the Northeast as elsewhere--four years primary (with sometimes an additional fifth and occasionally sixth grade); seven years secondary (consisting of a four-year ginasio cycle and three-year colegio); and some universities and isolated faculties of higher education.

While education in the 19th century was largely in private hands, and thus only for the few, public education gradually established its primacy in terms of total enrollment during the course of the twentieth century. Even in one of the poorest states--Maranhao--by 1958 public schools accounted for 84.6% of primary schools compared with 15.4% private; 81% of students attended the former and 19% the latter.

Yet, the emphasis of public education was at the bottom--in primary education. Secondary education was still essentially something for the upper and middle classes who could afford it. The majority of secondary schools were private. Until 1947 the State of Bahia maintained only a single colegio. Further the quality of public primary schools was low; even if they could afford it, public school graduates were (and still are) least successful in passing admission examinations to enter ginasio. There were an abundance of normal schools in the cities turning out many more teachers than could be absorbed, but few in the interior. Normal schools served then, as today, as girls' secondary schools in which perhaps a majority of students had no intention to teach.

With respect to administration each of the states had a Secretariat of Education (and, following a 1961 law, a

policy-making State Education Council). Some of the Secretariats were, however, combined with Secretariats of Health. The Secretariats were meagerly staffed, mainly with part-time employees, largely appointed on a political basis and with complete turnover at the top with changes in state administration. Many were, nonetheless, competent individuals, frequently with other associations in teaching or administrative posts with superior and secondary schools.

The functions of the Secretariats were in large part concerned with appointment and perhaps payment of teachers and principals throughout the State system. In some states, however, financial and accounting management was delegated to the Secretariat of Finance. School principals were appointed with little or no regard to leadership or administrative capability; however, there was no supply of trained school administrators to draw upon. Teachers were supposed to be normal school (colegio level) graduates but there were few of them willing to serve in the interior.

The construction of schools seemed to have been decided on a more less ad hoc basis; sometimes fairly ambitious projects were undertaken at the behest of the Governor. Construction and repair was generally left to the Secretariat of Public Works. Many schools reached extremes of disrepair and dilapidation, but were continued in use at least in those classrooms still barely serviceable. A large part of the schools were converted buildings, often leased or made available by municipalities or private organizations; many were inadequate and equipment was generally poor.

Planning was rudimentary. Neither were there reliable statistics although some states possessed respectable data on number of schools, students and teachers going back over a number of years. No real research was conducted although some interesting educational experiments were tried; frequently they were too costly to replicate and enthusiasm waned.

One gains the impression that officials of Secretariats rarely travelled to the interior and did not know their school systems very well. As schools frequently complain to this day that mail inquiries to Secretariats have only limited productivity, presumably this was at least as true in the past. Salary payments were not always timely, and often very late. However, teaching was mostly a part-time job of women with other jobs or other breadwinners in the family, so they apparently managed to get by.

Few of the states had curricula and for those that did they largely paralleled those of southern Brazil. In any event the unwritten curriculum and teaching methods were traditional. Students had few textbooks; the use of copybooks and rote memorization were major techniques.

Only a portion of the public schools came under the administration of the State Secretariats. Most of the public elementary school children attended municipal (county) schools, and over half the public secondary students attended either federal or municipal schools. In theory, and more or less in law, the state was to run secondary schools and primary schools in urban areas; the municipalities were to operate the public schools in

rural areas. In fact, the picture was more confused. Some large urban municipalities had extensive primary and even secondary systems; some state schools were one- to four-room affairs in rather remote localities. Sometimes there were state and municipal schools down the street from each other; sometimes they had a state and a municipal school in the same building; some schools seem to have changed administration from year to year; sometimes the municipality provided the building, the state the teachers. In short, the range of possibilities was the same as it is today. Much seemed to have been determined on the pragmatic basis of who had money or facilities to do what.

Administrative deficiencies and lack of adequate planning at the top were reflected in poor performance of the public schools themselves. The municipal schools, lacking in resources in normal school graduates and the inclination or disposable funds to pay reasonable teachers salaries, were the most deficient--not uniformly but on average. Taking state and municipal schools together, about 60% of teachers lacked a normal school education, and most of these had four years of schooling or less. Frequently, a significant number of schools, state and municipal, were out of operation for one reason or another, generally lack of teachers (or money to pay them). Drought with its consequent migrations played havoc with the school system as well as everything else.

A great part of the educational effort expended by students in Northeast Brazil circa 1960 consisted of going to the first grade. Many enrolled, fewer stayed to present themselves for examination, and very few passed. A goodly number

returned year after year making a sort of career out of the first grade. At higher levels something of the same sort, though less severe, occurred. Further many schools (particularly municipal) offered only one or two grades, leaving the promoted pupil often with no place to go.

In consequence, what Northeast Brazil had circa 1960 was an acute case of a phenomenon which occurs throughout Brazil-- the problem of "dropout-repetition" or "evasao-repetencia". Because it was a long-standing and nation-wide phenomenon, it was not a problem that aroused serious administrative pressure or public clamor to cure; it was the way things were.

#### B. Basic Causes of the Educational Problem

The foregoing description of the educational systems of Northeast Brazil points up the symptoms of an ineffective response to the needs of the area for public education. It would be possible to catalog these symptoms in greater detail and analyze the cause of each. However, such a diagnostic approach will not lead us to the core of the problem, but only fragment it beyond hope of dealing with in manageable terms.

Our approach, therefore, has been to search for root causes to which all the symptoms can be directly attributed. These appear to us to be the following.

1. Enrollment Capacity. The physical capacity of public schools was inadequate to meet social and economic needs and was not optimally utilized. The deficiency was most acute at all levels but particularly at the ginasio and colegio levels to

meet manpower shortages for people of substantial levels of educational achievement. In urban areas the chief constraint on enrollment was lack of classroom space. In interior rural areas it was essentially lack of teachers, as some facility for a one-room schoolhouse could usually be devised.

2. Management of State System. The State Secretariats of Education were not effectively organized and staffed to plan, control and supervise the state system in order to optimize efficiency or output.

3. Management of Municipal System. Municipal schools suffered from the same management deficiency as the State. Lack of integration of the two systems further promoted inefficiency and contributed to inability to conceive problems in terms of state-wide plans or goals.

4. Training. There were serious deficiencies in availability of trained professional personnel at all levels from the State Secretariat to the classroom teachers.

5. Instructional System. Reliance was placed on a traditional instructional system rather than on reorganizing the educational structure and constantly refining techniques to deal most effectively with the dual problem of the child in his circumstances and society in its social and economic needs.

6. Financial Resources. Financial resources were inadequate to redress the problems described above, and these resources were not optimally utilized.

7. National Leadership. There was no really effective leadership and support from the national government to effect serious reforms or improve management.

Deficiencies apart, there must also be recognized a significant element of good health. Education by 1960 was no longer the exclusive prerogative of the few. In ever increasing degree endeavors were being made to provide public education for the many. This was something solid on which to build.

### III. THE POLITICAL CLIMATE AND GENERAL AID OBJECTIVES

#### A. Events Leading to Establishment of SUDENE

During the early post-war years the Brazilian Government laid heavy emphasis on the development of Southern Brazil--in particular of the Rio-Sao Paulo-Brazilia triangle. In order to concentrate efforts on this economically more promising section of the country, the problem of developing or assisting the poverty-stricken Northeast was essentially deferred.

Beginning in the late 1950's, however, a combination of factors made this deferral politically untenable. Severe drought in the Northeast in 1957 and 1958 caused immense hardship. In its wake was a build-up of political agitation, much of it fed by communist elements internal and external to Brazil. The Soviet Union, Communist China, and Castroite Cuba all saw opportunities to exploit the unrest as a means of catapulting Brazil into the communist orbit. Political leaders supported by such elements were making strong bids for power.

Soon the problems of Northeast Brazil were receiving extensive media coverage in the outside world. American journalists in particular discovered Northeast Brazil and

presented frightening pictures of pervasive poverty and of the danger that the largest nation in Latin America might, through the despair of a large part of its people, follow Cuba into the communist camp.

The Brazilian Government itself stirred to action to meet the problem--most notably through the establishment of the Superintendency for the Development of the Northeast (SUDENE) in 1959. SUDENE was a federally-supported agency charged with multi-purpose activities to bring about development of the region in cooperation with the states.

B. Developing AID Interest in the Northeast

Meanwhile, the United States Government, under the Kennedy administration, was moved to give attention to Northeast Brazil through the AID program. This attention gained rapid momentum in 1961, culminating in the dispatch of a team (known as the "Bohan team" after its leader) to study Northeast problems and review how support might be given to the SUDENE program. The Bohan report<sup>1/</sup> recommended in effect a six-year plan to provide \$278 million in USAID to Northeast Brazil, of which \$33 million would be spent in the first year and \$98 million in the succeeding two. The main fields in which the Bohan team proposed that the aid be spent were assistance in outward migration of Northeasterners to other states, agriculture, relief of drought conditions, roads and power, education and public health.

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<sup>1/</sup> Northeast Brazil Survey Team Report, 1962.

The outgrowth of this report was a decision by the United States to provide immediate action support of \$33 million in dollars or cruzeiros to Northeast Brazil development projects and an additional \$98 million during calendar years 1962 and 1963. This was embodied in a Special Northeast Agreement signed between Brazil and the United States on April 13, 1962. The agreement also expressed intent of Brazil and the United States to consider participating in the financing of long-term developments beyond 1963. The agreement further provided for establishment by the United States of a special office in the Northeast to carry out USAID's responsibilities. Thus came about the establishment in Recife of the Northeast office of USAID/Brazil, known as USAID/NE.

Meanwhile, the general political and economic situation in Brazil was rapidly deteriorating into confusion. Following the brief administration of Janio Quadros, the presidency fell to the controversial Joao Goulart in August 1961. Goulart served until his overthrow in the revolution of April 1964. It was entirely during the chaotic conditions of this regime that the educational program for Northeast Brazil was forged and commenced operation. If in terms of political and economic need no time was more crucial for the United States to extend help to Northeastern Brazil, so also no period was less auspicious for program planning and administration.

With this background we can study the planning and strategy of the program.

## PART THREE: DESCRIPTION OF THE PROGRAM

### I. PLANNING AND NEGOTIATION

Planning of an education program for Northeast Brazil began as early as the first half of 1961. Originally the conception had apparently been in terms of a program at all levels of the educational system but without a school construction element.

Thinking was soon modified, however, in the direction of concentrating on elementary education and particularly the construction of elementary schools. Even prior to the appointment of the Bohan Committee, a decision was reached to negotiate an agreement along these lines for the State of Pernambuco. This state was selected in order to support the moderates of Pernambuco against a bid for power in the forthcoming election by the leftist Mayor of Recife who was making education a popular issue.

Active negotiation of the Pernambuco agreement took place in early 1962. The Pernambuco agreement was finally signed in June 1962, too late to have had much effect on the election that year in which the Mayor of Recife gained the governorship. Following inauguration of the new Governor in April 1963 and his criticism of the program, the Pernambuco program ground to a halt and was not renegotiated and revived until after the revolution of April 1964. The original Pernambuco agreement is unique also in that it was funded outside the Special Northeast Agreement and without SUDENE as a partner.

The Pernambuco agreement is important, however, because to a great extent it created a precedent for the program format and language of succeeding agreements with the other states.

It also serves to identify the speed with which the program was conceived, developed, negotiated, signed, and put into operation.

The chronology is as follows:

Decision made to negotiate agreement respecting Pernambuco .....	late Sept. 1961
First visit to Pernambuco made by USAID officers.....	Nov. 2, 1961
Bohan report submitted .....	Jan. 30, 1962
Agreement on Pernambuco signed .....	June 20, 1962
Cornerstone laying for first school .....	Aug. 13, 1962

The Pernambuco agreement was soon followed by an agreement on Rio Grande do Norte, advanced by pressure of that state's Governor, on December 3, 1962. This agreement included the full list of parties who were to sign all subsequent agreements:

SUDENE

The State (Rio Grande do Norte)

Ministry of Education and Culture of Brazil

USAID

Agreements on the other eight states were developed and negotiated in 1963 and signed at various dates through October of that year.

The record of the negotiations, particularly of the two forerunner agreements, is replete with controversy involving many organizations and personalities during a period of political flux. Much of the debate arose over conflict between USAID's desire for a substantive role in the conduct of the program and over the use of funds and Brazilian sensitivities towards USAID

demands as a reflection on the competence of Brazilian organizations and as unwanted foreign interference.

Initially in the Pernambuco agreement it was the federal government, then headed by Goulart, which objected to a provision assigning a USAID official to work with the Pernambuco Secretary of Education in a top echelon capacity. Later in the negotiation of the Rio Grande do Norte agreement, there was bitter opposition on the part of SUDENE over proposed use of American construction supervisors and proposed identification of project activities as a part of the Alliance for Progress. SUDENE further wanted to stipulate that U.S. technical assistance to the State would be provided only if requested by SUDENE. Conversely, USAID had little confidence in the administrative capability of the SUDENE of that time and was unwilling to concede in substance on these points.

The force of SUDENE's opposition appears to have been weakened largely by the determination of the Governor of Rio Grande do Norte and his ability to secure President Goulart's support for the program.

The main negotiating problem in the agreements with the final eight states was USAID's election to fund its share in the programs largely through cruzeiro loans rather than grants as in the case of the first two states. The total funds involved (Cr. 17,280,000,000 or NCr. 17,280,000) had originated under the PL 480 program. These cruzeiros could be used only through agreement between the U.S. and Brazilian Governments; the Brazilian Government had been in effect immobilizing these

cruzeiros so that their value was rapidly disappearing by the process of inflation. SUDENE's objection was not the use of these funds but to their provision in the form of a loan to SUDENE. Ultimately, however, it accepted the loan concept, presumably on the theory that, under conditions of inflation, a loan was almost tantamount to a grant.

## II. PROGRAM OBJECTIVES, GOALS AND STRATEGY

### A. Program Objectives

The clear purpose of the educational program, as emerges from the history described above, was to make a rapid, substantial and visible impact on education in Northeast Brazil. This motivated the choice of school construction and equipment as the major feature of the program and the selection of a three-year period for the term of the agreement.

The decision to narrow the program to elementary education presumably was dictated by a number of considerations. First, it seemed a logical place to start and, given the conception of a three-year program (presumably to be followed later with further activities), attention could be given to higher levels later as increasing numbers of students began to flow through the primary system. More important, doubtless, was that concentration on elementary education could achieve a wider impact and benefit most the lower income groups.

The program objectives were presumably influenced by the Bohan report--although conversely the advanced stage of USAID/B's own planning also influenced the Bohan report. With respect to

education the Bohan report recommended a five-year program to achieve the following:<sup>1/</sup>

1. Provide space for all of the 4.5 million primary school age children in the Northeast by building another 39,000 classrooms at 8,000 per year; also massive training of 78,000 new teachers and curriculum revision.<sup>2/</sup>
2. Expand vocational secondary education by trebling the number of such schools from 70 to 210 with a total enrollment of 15,000.

Though on a somewhat less ambitious scale (16,000 classrooms over three years) the program essentially embraced the first objective of the Bohan report. The second objective was not included in the program; however, a separate program in support of vocational education was later started.

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<sup>1/</sup> The Bohan report also recommended a one-year short-term program that would precede the five-year program. With respect to elementary education this involved the improvement and establishment of several audio visual centers. While the distinction between one- and five-year programs gave way in the final definition of a program to a single three-year program (with implications that further activities would follow), some provision with respect to audio-visual equipment were included in the SUDENE/AID program.

<sup>2/</sup> The Bohan report assumed that only 30% of primary-age children were in school and that 39,000 classrooms would provide space (at 80 per classroom in two shifts of 40 each) for the remaining 3,000,000. While it underestimated the proportion in school and overestimated average classroom use, the net estimate of 39,000 classrooms required to accommodate all primary school-age children was fairly close to the mark.

The program agreements for each of the States recite the language of the Punta del Este agreement, which proposed "to eliminate adult illiteracy and by 1970 to assure as a minimum access to six years of primary education for each school age child in Latin America."<sup>1/</sup> The program agreements, however, stopped reciting from the Punta del Este agreement in the middle of a sentence. The balance of the sentence following a semi-colon after Latin America reads: "to modernize and expand vocational, technical, secondary and higher educational and training facilities; to strengthen the capacity for basic and applied research; and to provide the competent personnel required in rapidly-growing societies."

The program agreements proceed further to state the purpose of the program is "to establish the basis for an improved and expanded elementary ...system in the state..." The order of words is perhaps important as indicating a recognition, despite the emphasis on construction and expansion, of the need for qualitative improvement. However, the program had no explicit goals as to how much it was to achieve qualitatively in the sense of measurable improvement in the output of the system.

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<sup>1/</sup> The program as finally constituted did provide for some activities in adult education. The evaluation of these comparatively minor activities, which were halted early in the program following a virtual cessation of Brazilian activity in this field, is not a part of our charge. More recently the Government of Brazil has initiated in coordination with the states a new program for adult literacy.

In effect the aim was to make a big impact on the population of Northeastern Brazil. Or in the language of the Bohan report (speaking of all U.S. activities in the Northeast and not educational alone) the aim was an "action program of sufficient magnitude to impress upon the aspiring, democratic people of Brazil the willingness of the Alliance for Progress to join with them in seeking a lasting improvement in their way of life..."

B. The Program Strategy

Each state program agreement lists two groups of measures that are to be taken to achieve its purpose. The first group consists of "quantitative" measures--all dealing with construction or equipment--and itemizes the number of each item that is to be supplied.

The second group of measures, termed " qualitative" deals essentially with human resources. Again, however, most items were expressed in quantitative terms--so many teachers, supervisors, principals, etc. to be trained, without indication of length of time of courses or results to be achieved. An additional item is the purchase of books and instructional materials, but this is not quantified.

The agreements also include a number of provisions on "administration". These provisions provide for establishment within each Secretariat of Education of a commission for administration of the project; for technical assistance to improve administration; and for the purchase of equipment such as office equipment and vehicles.

It will be useful to examine the strategy in greater detail in terms of its responsiveness to the basic problems of Northeast Brazil education suggested earlier in this report (pp. 53-55 ).

1. Enrollment Capacity. The main strategy was to increase physical capacity of the school system. The difficulties were the following:

a. An expansion of enrollment in the state primary schools of the order planned (over 100%) over a three-year period was excessive for a system already overburdened by qualitative deficiencies. Even under optimal conditions an expansion at this rate would have made it difficult to maintain, let alone improve, quality. The program's heavy concentration on physical facilities left too few resources for the qualitative side.

b. The projected expansion was too fast in terms of potentialities for orderly planning, site selection, and construction or renovation of 16,000 classrooms, plus other facilities, over an area of 600,000 square miles.

c. The projected expansion of the primary system without any attention to the secondary would have exacerbated an already evident shortage of secondary schools (most immediately ginaseos). This objection loses some of its force if it is conceded that there was a clear interest by the United States to provide further assistance beyond the three-year period so that this problem could be quickly addressed. Nonetheless, the strategy would have been considerably improved by the inclusion of a moderate ginasio program both to deflate somewhat the

excessive primary school buildup and to enable a second phase program to proceed on a sounder, tested basis without the "crash" approach necessary in the initial program.

d. With respect to rural areas the program put too much stress on school construction. The main constraint in such areas is supply of teachers. Rural schools can be built cheaply of local materials such as mud for housebuilding. This is currently being done in Maranhao alone at a rate in excess of 500 schools a year. The program's decision to build "modern" one- and two-room schoolhouses was anomolous.

The decision to provide school equipment was sensible to assure the overall quality and utility of the schools built.

2. Management of State System. The strategy of the program included some recognition of the importance of improving management and management capability of the State Secretariats. In this respect the assistance contemplated was essentially training and the provision of motor vehicles and office equipment. The agreements generally identified the particular units to be assisted as primary education, normal school, teacher training and other units specifically related to the complex of planned activities under the program.

The most important and immediate concern of the strategy, however, was to develop within each Secretariat a separate commission for administration of the SUDENE/AID program. The logic rested on the doubtless correct assessment that the regular Secretariat organizations of that time could not be built up fast enough nor (given normal state personnel practices, salary

scales, etc.) sufficiently well to administer a program of the scope envisaged. Therefore, for the success of the program the creation of an elite organization that could be paid higher salaries out of program funds and worked full time on program activities, appeared to be the best expedient.

The problem of reconciliation of this form of special organization with a long-term aim of institution building of efficient State Secretariats can best be illustrated by the following quotation from a USAID/NE document: 1/

"Immediately subordinated to the secretary's office usually there are the so-called "Special Commissions for the Implementation of Agreements", which duplicate the responsibilities for several functions among them and also in relation to regular existing offices in the ordinary structure. These commissions or groups, encompass one director or coordinator, a technical advisory staff, an architect and engineering office, a program and control office, an accounting office, etc. So in fact, the operation of these commissions really duplicate, several times, the utilization of men, money and material to perform a work which aims at a common goal - the execution of supplementary plans of pre-investment and investment in the field of elementary and secondary education. At the moment, there are three major programs financed under special agreements: National Plan of Education (federal funds); Educational Salary Plan (private industry funds through federal government); and Alliance for Progress Plan (USAID/CONTAP/SUDENE/STATE funds). In some states one can even find a "special commission" established to implement each one of the above mentioned plans."

3. Management of Municipal System. The original program strategy appears to have ignored the existence of a municipal school system - to which more than 50% of the public primary school children went in the early 1960's - just as they do today.

In the language of the program agreements the purpose was to improve the "elementary and basic education system in" each

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1/ Diagnosis of Northeast Education, May 19, 1967.

state. This is ambiguous. Does it view the state and municipal systems together as a single system? Or does "in" a state have the same value as "of"?

AID administrators in Brazil now view the program as concerned only with the state system of education and, therefore, essentially an urban or urban-small town program having little concern with rural areas, which are almost the exclusive domain of the municipal system. On the other hand, the original program documents clearly propose to move deep into areas generally regarded as of municipal responsibility. This is apparent from language in each program agreement stating an intention to build schools in areas with as few as 100 unschooled children.

It is confirmed by the record showing that, of 540 new schools completed under the program, 343 contain only three classrooms or less. Many locations are rural; in fact, one Secretary of Education volunteered as one of his few criticisms of the program that it built schools in remote areas where he did not want them. Conversely, not a single school was built in such cities as Salvador, second largest in the Northeast.

The disinclination evident in the original program strategy to consider the municipal schools as a part of the elementary education problem in the Northeast has been pursued with singular consistency throughout the program's life. For example, in a 60-odd page Diagnosis of the Educational Sector in Northeast Brazil of May 24, 1967, prepared by USAID/NE, only the following references to municipal schools occur:

1. Some statistical tables showing, for example, that 1965 elementary school enrollment in municipal schools amounted to 1,077,695 compared with 895,623 for state schools and that there were 37,209 municipal teachers compared with 29,234 state.

2. In the elementary school section: "The elementary schools are organized and controlled by the respective states. However, one may find in some states a federally supported school. There are also municipal schools and private schools."

3. In the section on secondary education: "Primary education is predominately public, notably state and municipal. The municipal authorities according to law must require all 7-year olds to enter primary school.... Approximately 88% of the primary school enrollment is in public schools. Of these approximately 3/4 (sic) are in state schools and 1/4 (sic) in municipal schools."

It is difficult to understand how program administrators could have before them the statistics referred to in (1) and show so completely by general silence save for misleading or inaccurate references (2) or (3) a complete failure to grasp their significance to a diagnosis of education in Northeast Brazil. It has been a material shortcoming of the program not only that it failed to address the system of municipal primary schools - the largest public school system in the area - but also that it failed to state a relationship of program objectives to the municipal primary schools.

A root cause of the problem may lie deep in program history. The very first agreement (with Pernambuco) was specifically aimed at supporting the Governor of Pernambuco against a bid for power by the Mayor of the Municipality of Recife, who had begun his own educational program. This purely localized and transient event should not have had such wide consequences in a program which, aside from Recife, was not generally aimed at the large metropolitan areas.

4. Training. The program strategy was soundly conceived in the sense that extensive provision was made for training at all levels - state secretariat personnel, school administrators, supervisors, teachers, etc. The amount of training contemplated was considerable in terms of what could be mounted in a three-year period. It was, moreover, reasonable to expect (as events have generally proved) that the states would continue training programs on their own after the program had been terminated.

The strategy was also sensible in devoting some resources to the building of training institutions - normal schools, supervisory centers, and in-service teacher training centers. It did not contemplate the setting up of any on-going institutions for training school principals and other administrative personnel; while teacher training institutes can be used in some measure for this purpose, the development of a more definitive program to train professional school principals would have been a valuable addition.

5. Instructional System. The strategy did not face head-on the deficiency in the instructional system of Northeast schools. It recognized the problem to the extent of providing for training of educational personnel and some provision of textbooks. (Further the AID-supported nationwide COLTED program provided added support in the supply of textbooks in the Northeast.) By inference, therefore, the hope was that a series of inputs would bring about curriculum improvement, wider use of textbooks and other changes toward higher quality and relevance of instruction. It did not, however, appear to contemplate any concerted

approach to the problem nor provide for any research or experimentation.

6. Financial Resources. The program strategy involved substantial provision of financial resources. All of these resources were put into the elementary school expansion and related activities. The strategy did not provide for assisting the states in the general improvement of their financial management except to the extent that experience and related assistance derived from management of the program might have carry-over value.

7. National Leadership. The Federal Ministry of Education and Culture was made a party to the program agreements to furnish guidance and technical assistance to the states in pedagogic matters and to guide and carry out training of teachers in agreement with the State. Had there been a stronger program at the national level these commitments would have been more meaningful.

### C. General Appraisal of the Strategy

Neither the states, SUDENE, AID, nor the federal Government in the early 1960's were prepared to deal with all the problems of Northeast public education on a thorough, carefully planned and concerted basis. The program was above all else, as the history makes clear, an action program designed to make maximum impact as rapidly as possible.

In this sense the chief weakness of the strategy was in overestimating the speed with which construction could get underway and in underestimating the administrative complexities that would arise under this activity. This weakness, however, can be

as readily conceived as a virtue. Given the fact that the funds were depreciating cruzeiros, the better part of wisdom was to err on the side of moving too fast.

Further, the program strategy was generally constructive in its recognition of teacher training and other training needs. If it did not seek to deal directly and fundamentally with improving overall management of the school systems and the instructional system, it did provide for a variety of assistance partially satisfying or contributing to these ends. These forms of assistance could be regarded as laying groundwork that would be helpful for more thorough future programming under conditions of less time urgency.

A significant blind spot in the strategy was a disregard of the role and importance of the municipal schools in primary education in the Northeast.

#### D. Shifts in Strategy over Program Life

There were no "landmark" shifts in strategy during the course of the program. Program agreements were amended from time to time (indeed all of them in a general administrative housecleaning in 1966) to add some new monies, to reshuffle funds among states, to restate quantitative objectives to accord with realizable achievements, to curtail some activities and occasionally expand others, and to improve program administration. But no radical changes were made in the program's original design.

The program nonetheless underwent a considerable change in strategic outlook, brought about by a number of developments external and internal to the program during its initial years of

operation. Chief of these were:

1. Growing realization that the main objective of massive construction of schools could not be achieved because of the impossibility of planning and building at anywhere near the speed with which the cruzeiro funds were depreciating.

2. Growing realization that administrative problems, particularly with respect to construction, were getting out of control - which reached a climax in 1966 by virtual stoppage of the program until these problems could be sorted out.

3. The Brazilian revolution of 1964, which effected a definitive change in the political climate, and substituted an atmosphere of "wait and see what happens now" for the acute spirit of urgency which had characterized the program's initiation.

In consequence, by 1966 the program began to give more stress to training and qualitative objectives. School construction was abandoned except for completion of work in progress. The three-year period was stretched out with a view toward doing things better rather than doing things fast. Thus a program which had been intended to be substantially terminated by 1967 did not come to its close until 1970.

The final years of the program, therefore, were characterized by a much greater emphasis in working with the State Secretariats to improve their capabilities both in administration and in program development and operation. Participant training both in the United States and Brazil became a more central element. Teacher training became more a qualitative aim to upgrade instruction in existing schools than a quantitative aim to provide

teachers for the projected new schools that were not built. The development of teacher supervisory centers was given more attention.

This strategic shift was undoubtedly suitable to the conditions that emerged. Its thrust was to contribute to developing a stronger groundwork on which new program activities to strengthen public education in the Northeast could be undertaken. To the extent, however, that the central strategy shifted to institution building of the State Secretariats, the twilight of the program labored under obvious handicaps. In accordance with original program decisions, the Northeast AID office was technically restricted (though with respect to participant training a broader view could be taken) to primary education. As most of the major functions of Secretariats (planning, statistics, accounting and administration, construction, etc.) run across school levels, this restriction became patently anachronistic. However, new programs on a national scale were being developed by USAID/B, which made the time period difficult, until more fundamental decisions were reached, to determine future program activity for the Northeast.

### III. ADMINISTRATION OF THE PROGRAM

#### A. Functions of the Parties

Under the agreements, the administration of the program in each state was vested in the state with the State Secretary of Education named as executor. Supervision, control and provision of technical assistance was shared between SUDENE and USAID. MEC (Ministry of Education and Culture, Rio) played a collaborating role.

## 1. Functions of the State.

The States were required to carry out and complete the project in accordance with sound engineering, construction, and financial practice and in conformity with plans, budgets and other documents approved by SUDENE and USAID. The States were to request funds for periods of not more than three months; each request was to provide detailed information on funds previously made available, statement of progress in completing projects and changes in costs experienced, and a description of projected use of funds for the succeeding three months, accompanied by detailed work plans and budget.

The states were also required to undertake certain responsibilities - especially to pay teachers salaries, to acquire land for construction outside the program funds, to secure a maximum contribution from municipalities and other Brazilian sources of materials and services for the schools to be constructed; to pay wages and allowances for scholarship grants under training programs; and to assume within three years the entire responsibility for continuing the activities financed.

## 2. Functions of SUDENE and USAID/B

SUDENE was charged with initial review and approval of State requests for funds and accompanying plans and documentation, following which they would go to USAID for approval. Either SUDENE or USAID could request changes. By mutual agreement SUDENE and USAID could order work or disbursement of funds stopped when not in accord with terms of the agreement.

SUDENE and USAID were each charged also with provision of

technical assistance at the request of the States (with requests to USAID to be transmitted through SUDENE). SUDENE and AID shared responsibilities for recruitment and selection of participant training candidates.

SUDENE was charged with exercising the following controls: auditing, ensuring the proper use of funds, checking the execution of plans, and inspecting and evaluating results to ensure compliance with proper technical standards.

USAID was also authorized to contract, with funds outside the agreement, for such additional services, including advisory and architectural and engineering review as it might consider necessary. It was also authorized to use personnel under such contracts to review plans and specifications to determine whether they met standards and to perform inspections to determine whether standards were met.

3. Functions of MEC . MEC was to furnish guidance and technical assistance to the States in pedagogical matters; guide or carry out teacher training in mutual agreement with the States; collaborate with the States in school construction projects; and evaluate in pedagogical matters accomplishments of the project. (The very important and growing role of MEC in the development of education in the Northeast is brought out in Part Four of this report in discussion of various subjects such as enrollment, teacher supervision, etc. While this had important inter-relations to the SUDENE/AID program nonetheless MEC did not play an active role in administration of the SUDENE/AID program per se. For this reason we need not revert to it in the course of this chapter.)

## B. General Problems of Administration

The main problems of administration occurred in the vital sector of school construction, and their interplay with the process of inflation caused the major shortfall in program objectives. Because of the overriding importance of this complex of construction difficulties, it is necessary to devote an entire chapter (immediately following) to it. At this point, however, it is desirable to outline administrative problems as they affected the program as a whole without the distractions of the construction phase.

1. Initial Problems of the States. The States found the system of administration to present many problems. Preparation on a tri-monthly basis of the documentation required on activities all over their states - involving simultaneous review of past progress and projects for the ensuing three months period - stretched their administrative capabilities to the utmost. Even the existence of a full-time Commission solely to administer the program (as provided by the agreement) was insufficient for the task. In retrospect, some officials commented that each three-month submission was tantamount to a year's work of program review, budgeting and planning. In consequence, submission of plans fell behind schedule and quality suffered from an atmosphere of haste.

A second problem for the States was that each plan had to be approved by both SUDENE and USAID, resulting in further delays. The State might satisfy USAID but not SUDENE, or vice versa. Getting a plan through both often appeared insuperable. Some State officials describe how they came to Recife, where USAID and SUDENE

each had offices scattered in several buildings. They claim to have made numerous special trips to Recife to go back and forth from one office to another trying to promote agreement. Some of the poorer more distant states did not do this, and some observers feel they suffered for it.

2. Initial Problems of SUDENE/USAID Supervision. The difficulties that SUDENE and AID had in negotiating the program agreements continued into the implementation stage. The initial atmosphere was one of mutual distrust. In addition, USAID had no experience in dealing in the area, and the education staff of the SUDENE of 1963, if AID accounts of the time are correct, had practically no educational experience. The system of successive reviews on a tri-monthly basis, not of one homogeneous program but of ten programs administered by ten different Secretariats over a vast territory, was more than operations under such circumstances could comfortably or efficiently bear. The wonder is perhaps less that there were so many delays as that they could agree upon any plans at all. The need to obligate to keep the program moving, the pressures of the State governments, and the constant depreciation of funds through inflation, however, were factors that tended to force approvals - even though both agencies might have substantial reservations. The procedure, therefore, became more of an administrative bottleneck than one through which careful and workmanlike supervision could be exercised.

3. Administration Following the Revolution. Following the 1964 Revolution, relations among SUDENE, the States and AID improved. This was partly owing to an ideological shift in

the Brazilian agencies and partly also to improvement in the technical competence of the Brazilian agencies. Nonetheless, fundamental problems in making a system work which had gotten off to a difficult start lingered.

Matters were brought to a head in early 1966 by the conduct of audits in most of the States by the Controller's staff of USAID/B. These audits brought out a number of problems, most of which were not so serious individually as they were alarming in their aggregate proportions. One of the problems that caused most concern was the uncovering of some evidence (though not widespread) of misappropriation of funds, including false receipts. This was coupled with findings that SUDENE had made payments largely on the basis of desk audits and without field examinations that might have uncovered defalcations. The audits also pointed out that procedures for awarding contracts were not always in accordance with good practice or Brazilian law. To these were added a large bulk of exceptions based on allegations of faulty construction. (see succeeding chapter)

In any event these audits caused SUDENE and USAID in effect to suspend the program until the problems could be straightened out. This occupied the attention of all parties for more than a year, during which little was done under the program. The process included renegotiation of all program agreements to reform the program for the use of remaining funds. In the process, the funds allocated to some states which had been slowest and most ineffective in use of funds were transferred to other states, in which better utilization was expected.

The record indicates that all of the parties devoted considerable effort to resolving problems and getting the program going again. Above all, they evolved effective means of working together. Further, the States became more adept in submitting their plans - some of them strengthening their Commissions for the execution of the project through adding new administrative talent. In the process very good working relations were developed. While differences of opinion still exist, the dominant feeling is that the problems belong to history and that those connected with the program now know how to avoid them. While the USAID/B Controller has not conducted final audits of the program, a second audit of the Pernambuco program was made in 1968. This audit was favorable and indicated only two small problems.

4. Organization and Utilization of USAID's Northeast Education Office. USAID/B has undertaken its responsibilities with respect to the SUDENE/AID program through the branch mission established in Recife to administer the total AID program in Northeast Brazil. The division responsible is the Human Resources Office (hereafter named "NEHRO"). The program has functioned through a small corps of American administrators and technicians (which apparently never exceeded six and which since 1966 has included two technicians obtained under contract with the State University of New York) and about seven or eight Brazilian technicians. 1/

Most of the time of the American and Brazilian technicians

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1/ The Brazilian technicians have mostly been trained at Belo Horizonte and have also received training in the United States.

has been utilized in the administration of the project and the following of developments in elementary education related to it.<sup>1/</sup> This applied not only to regular staff but also to SUNY contractors. As the USAID/B audit of this contract states:

"In the Northeast SUNY's performance has been rated satisfactory or better. Yet regarding this latter project we found that SUNY's two-man team was frequently used for USAID type administrative matters related to education."

Given an undertaking that really involved 10 programs in many different states, and the host of administrative problems that arose, the staff has essentially divided its time between planning, reporting and program review in the home office in Recife and frequent short trips to the respective states. The local Brazilian technicians largely serve as desk officers, each of which has two states she regularly visits. Of the American staff one supervises the program and the remainder (now reduced to consist of the SUNY contract employees) essentially provide backstopping support for the desk officers.

5. Provision of Technical Assistance. Given the highly varied pattern of work of the NEHRO educational staff, it is difficult to reach judgment as to what the real technical assistance component was. To the extent that encouraging, prodding and following up whether States were doing what they said they would, and helping them to prepare administrative reports on the project and get them in faster can be regarded as technical assistance, then the input was substantial. In the most substantive sense, however, of working closely with Brazilian technicians on a

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<sup>1/</sup> Several engineers of USAID/NE also devoted considerable time to construction aspects of the program.

day-to-day basis to find solutions to some of the major problems involved in improving the quality of elementary education in Northeastern Brazil, our judgment is that the input was small. It was rare that a member of the Northeast educational staff was able to spend long enough in any one state at any one time to provide this type of assistance. Further, the nature of the work performed in the respective States by representatives of the NEHRO office was rarely recognized by the State Secretariats as technical assistance. To the question "What technical assistance did you receive from members of the NEHRO staff?" there was generally no response, except to mention one direct-hire employee heavily engaged in teacher training. In several instances the SUNY contract employees were referred to as "fiscalidores" (inspectors).

To a degree, however, the USAID did provide some technical assistance for special projects (e.g., curriculum development) by obtaining and making available to the States for periods of as long as a year contract Brazilian technicians trained at Belo Horizonte.

Our general conclusion is that the technical assistance input into the program was small in comparison with the scope of the elementary education problems of Northeastern Brazil.

Had more technical service resources been available to the program a number of major problems might have been tackled with greater success and a stronger groundwork laid for future program activities in Northeastern Brazil. It must be recognized, however, that given the circumstances under which the program began, much of this assistance would probably not have been effectively used during the earlier years of program operations. Specific types of

technical assistance that could have supported a stronger program are the following:

1. Technical assistance to help achieve major reforms in the normal school system, which remains a major problem in satisfying teacher quality. As indicated below (p 142) NEHRO itself in an internal review recognized a serious lack of time for technical assistance in this area and a need for special American/Brazilian technical assistance to cope with it.
2. Technical assistance for at least one pilot project to work on the problem of school dropout and repetition. This was initially envisaged under the SUNY contract (though plans varied as to whether projects would be carried out in the Northeast or elsewhere.)
3. Technical assistance to provide at least a pilot project in one state to develop an efficient administrative system for the state elementary school system, together with a system of cooperation with the municipal system (and setting of state standards) and provision of management assistance to them.
4. Technical assistance to develop a sophisticated and cost/effective program of dealing with the "lay teacher problem".
5. Technical assistance to permit studies of the effectiveness of supervisory and training programs established under the programs. (As indicated in p.134 below States have not had resources to conduct or been able to obtain technical assistance for such studies.)
6. Research studies into the problems of teaching students from extremely deprived backgrounds (both rural and urban) in relation to curriculum development and the organization of instruction.

With respect to technical assistance provided by SUDENE, we did not consider it fruitful to make an extensive review. We did note, however, that at the outset of the program SUDENE was not in a position to make a significant input. With the years, however, it has developed a capability, and a number of State Secretariats made favorable reference to assistance received from that source. SUDENE is currently taking a particular interest in the application of

new technology, particularly television, to education problems in the Northeast.

Owing to a recent shift in Government policy, the Federal Ministry of Education and Culture is emerging as a source of technical assistance to the States. At the time of our evaluation it was uncertain how the MEC would concert its activities with SUDENE in the future.

It is readily apparent that by 1970 the entire pattern of rendering technical assistance to the states had developed into a wholly unsatisfactory pattern, which hopefully is transitory until new programs are soundly underway. At the moment, however, States are receiving too many short visits from too many people trying to help them do too many things.

#### IV. ADMINISTRATION OF SCHOOL CONSTRUCTION IN AN INFLATIONARY PERIOD

As originally conceived the program aimed to achieve an impressive expansion in physical facilities over a short time period. In this objective the shortfall of what was accomplished compared with what had been planned was severe.

The overriding reason for this shortfall is unmistakably clear - it lay in the steady erosion of the value of funds owing to inflation, an inflation which was particularly rapid in the crucial years of 1963-1964, but which continued during the remaining years, as the following index makes clear:

Index of Official Exchange Rate

1962 -- 100	1967 -- 571
1963 -- 130	1968 -- 806
1964 -- 389	1969 -- 857
1965 -- 467	1970 -- 989
1966 -- 467	

Source: Brazil Statistical Yearbook

Inflation, however, was not the only factor. The full cause of shortfall was the interplay of inflation with very substantial problems in the implementation of the construction phase of the agreement. Because of their complexity these problems have been the subject of considerable misunderstanding. We make the following effort to bring out the highlights of the problems as clearly and briefly as possible:

1. The original planning was overly optimistic as to costs. Estimates were not based on specifications or on developed concepts as to the quality of construction to be required.
2. The speed with which the program could be gotten underway was miscalculated. The selection of sites in hundreds of localities, development of plans, and letting of contracts over an area as large as the American South required immense amounts of time and travel to do at all, let alone well. Decisions were necessarily reached with less care than would normally be desired. Selection of sites and planning of facilities was sometimes poor. Further, as with any large and new program which is started out fast, rather than with a phased build-up, there was little opportunity to develop procedures and train staff carefully.
3. Problems were compounded by the confusion as to the roles to be played by AID-selected consulting architects. The

program agreements provided that AID could hire such firms to "review plans and specifications to ensure that [they] meet prescribed standards", and to "advise USAID/B if construction does not meet such standards." The contracts signed by AID/Washington with such firms, however, went much further, giving the contractor responsibility to (1) approve plans and specifications; (2) provide technical advice in the selection, negotiation and award of construction contracts and approve all contracts and contract awards; (3) make at least three inspections per building; (4) make final inspection with State engineers; and (5) prepare certificates of acceptance and authorization for payment.

4. The difficulty was further compounded by the fact that the firms were not contracted by AID/Washington and brought on the job until many schools were already under construction and a substantial amount of money had been disbursed. These factors laid the groundwork for vast differences of opinion among the consulting architects, the local Brazilian building contractors, SUDENE administrators and engineers, the State Secretariats and their Special Commissions and engineers, and local AID administrators and engineers and auditors, as to the standards to which construction should or could be held - frequently over one-classroom schoolhouses situated off the highways at widely separated obscure points in States as large as Texas.

5. Opposition to the retention of American consulting architects by SUDENE and some of the States, coupled with their late arrival and unfamiliarity with Northeastern Brazil or the Portuguese language, led to a difficult working relationship. We

are not technically qualified to judge to what extent the American consultants were correct in the positions they took. Certainly some Brazilian authorities who seem reasonable to us concede the validity of many of their points. However, the concern of the consultants with such points as earthquakes and strongwinds (neither of which occur in the Northeast) caused a degree of consternation. More substantively, insistence on materials or construction methods not normally used or even known in remote sections of the Northeast apparently created vast problems.

6. In any event the process of inspection and rectification of construction problems caused considerable delays and increased costs. Not only did building costs increase, but also administrative costs grew rapidly in consequence of the multiplicity of administrators, engineers, etc. and the discussions among all concerned. Most criticisms of construction seem to have been made and argued about after construction was completed or nearly so; neither inspectors nor their reports apparently moved fast enough for timely identification and resolution of problems. The problems of ironing out construction problems were described to us graphically in most of the states by many droll stories. A few examples will suffice:

a. The contractor would put up an Alliance for Progress plaque but, before the USAID consultant/architect arrived, the plaque would be stolen. The state would decide to wait to install the plaque until dedication of the building. The consultant/architect would arrive before this time and make another exception.

b. The consultant/architect would question wall construction and asked for a piece of plaster to be removed to check it. This would be done to the indignation of the State and local authorities who resented an unwillingness to take their word for it. In a subsequent inspection an exception would be made that the plaster had been damaged.

c. The consultant architect would complain about the paint. The school would be repainted. Then he didn't come back for three months, during which, through intensive school usage and climatic factors, the paint would be bad again. Another exception taken.

Such events occurred at some 500-odd building sites (largely with respect to schools of from 1 to 3 classrooms).

7. Matters came to a head following completion of the USAID Controller's audits on the programs in the various States in mid-1966. These reports constituted an extensive recital of problems - problems that had already been recognized and many new ones as well. The catalogue was extensive: poor construction; irregularities in bidding; fraudulent invoices or other indications of fraud; deviation of prices charged from normal local costs; several schools constructed in areas without children; delays in opening schools owing to lack of teachers; schools inadequately maintained; inadequate audit and inspection by SUDENE; failures to identify some schools constructed under the program with Alliance for Progress plaques. Following these audits, the program was stopped for a period of time, while all the parties gradually pulled together to resolve the problems. Meanwhile the cruzeiro kept declining - which cost the program more than was gained by the problem solving. There are in this record, we believe, several lessons to be learned:

a. It is undesirable to start school construction projects until there is on the job a reliable consulting architect, agreeable to all parties and familiar with local Brazilian conditions, charged with the approval of plans, on-site inspection, and approval of completed work.

b. It is preferable for USAID to avoid involvement in

construction work consisting of renovation of existing buildings or the construction (as was largely the case) of buildings of less than six classrooms, particularly in remote areas. The administrative costs of fulfilling AID's responsibilities to monitor such projects are excessive in relation to their low cost if built by normal Brazilian methods; such projects can be adequately dealt with through purely Brazilian program funding.

c. Adequate time must be allowed for planning not only an overall program but also for the selection of sites and the approval of building plans. It cannot be stressed too strongly that school site selection is an important and time-consuming factor.

d. Inspection of building sites should be made in concert among engineers and program monitors of a consulting engineering firm, USAID, and Brazilian agencies. It would be overreaction to events of the past to insist that all visits be joint; the heart of the matter is that there must be a cooperative and mutually satisfactory working relationship.

## V. PROGRAM EXPENDITURES AND QUANTITATIVE RESULTS

### A. Aggregate Program Costs

In terms of purchasing power at the time spent (rather than original cruzeiro value), we estimate the aggregate expenditures under the SUDENE/AID elementary education program at \$25 million, of which funds provided by AID constituted \$21.7 million. This was

a modest sum in terms of the size of the problem with which it dealt over a period of eight years. If we divide this total of \$25 million by the average annual enrollment of children (7-14 years) in primary schools during the period 1962-1968, the amount spent annually per child was about \$1.00 or about \$8.00 per child enrolled during the term of the program.

The costs of the program are shown in Table 2 (p.91 ) in accordance with two methods of computation. The first computes costs by converting cruzeiros into dollars at the rate prevailing at the time of signing of the program agreements. The second makes the computation as of the dates money was released to the states. The first makes only minor adjustment for inflation - to the extent that reprogrammed funds are converted at the lower rate prevailing at time of reprogramming. The second, while obviously closer, does not take into account the loss of purchasing power between release and actual expenditure, which frequently was between six and nine months. There is no way without a mammoth accounting exercise that this could be done. Possibly it would be warranted to make a guess that there was an additional shrinkage of 5%.

The data presented on the table do not, of course, include the value of commodities provided by the United States for school lunch programs in the Northeast. As general information and for comparative purposes it is interesting to note that during the same period this totalled \$20.6 million - or almost as much as was spent by AID on the substance of the educational program.

TABLE 2  
PROGRAM COSTS IN SUDENE/AID  
ELEMENTARY EDUCATION PROGRAM IN NORTHEASTERN BRAZIL  
(1962 through October 1970)

<u>Funding Source</u>	<u>Dollar Value of Funds as of Date of Program Agreements</u>	<u>Dollar Value of Funds as of Date of Release to States or Expenditure by AID</u>
USAID FUNDS:		
Special NE Agreement	\$ 46,228,950	\$ 17,412,755
Original Pernambuco Agreement	328,000	328,000
CONTAP	288,110	250,750
US direct-hire personnel, salaries, allowances, travel, etc.	473,537	473,537
Local personnel, salaries and benefits	387,242	387,242
Cost of contracts		
Consulting architects	1,385,000	1,385,000
State University of N.Y.	294,000	294,000
Participant training costs	994,000	994,000
PABAEE/DAP training and technical assistance	145,000	145,000
	<hr/>	<hr/>
TOTAL USAID	\$ 50,523,839	\$ 21,670,335
SUDENE	2,216,000	833,000
STATES OF NORTHEAST BRAZIL	6,256,000	2,352,500
	<hr/>	<hr/>
GRAND TOTAL	\$ 58,995,839	\$ 24,856,335

NOTE: This table does not include the cost of commodities furnished for school lunches. Contributions by the States in the form of land for construction and expenses for teachers' salaries, participant trainee salaries and allowances are also excluded. Local costs payable in cruzeiros on the architectural and university contracts are not included. The cost of books distributed in the Northeast by the USAID-supported COLTED program is likewise excluded.

1/ Or dates funds spent in case of direct disbursements by AID.

## B. Program Expenditures by State

While not all program costs can be broken down by States, this is possible with respect to the main cost elements. These data are presented in Table 3, both absolutely and in percentage share per state. It is a fairly reasonable assumption that other program costs, could they have been divided, would not have greatly altered the picture as to the relative effort made in each state; it is likely that the Pernambuco percentage would go down somewhat with others fractionally gaining.

## C. Quantitative Results in Terms of Program Targets

As indicated earlier, each program agreement included quantitative goals for each state. All programs focussed on three main areas: classroom construction and renovation and classroom equipment, training of teachers and other personnel, and establishment of teacher supervisory and training centers. Additional targets were set for construction and equipment of some normal schools, industrial arts centers, provision of books, and provision of school lunch kitchens and medical-dental units.

Owing to inflation and administrative problems described above, quantifiable accomplishments of the program experienced severe shortfalls when compared with the objectives established in the program agreements.

The extent of these shortfalls is indicated in Table 4, which compares the number of units planned in program agreements with actual accomplishments.

TABLE 3  
PROGRAM COSTS TO DATE BY STATE  
OF AID CONTRIBUTED CONVENIO AND CONTAP  
(dollar equivalents)

State	Special Northeast Agreement	Original Pernambuco Agreement and CONTAP	Total	% of Total
Alagoas	\$ 987,640	\$ 23,282	\$ 1,010,922	6
Bahia	1,923,350	48,206	1,971,556	11
Ceara	2,468,217	16,417	2,484,634	14
Maranhao	1,577,421	44,355	1,621,776	9
Minas Gerais	307,944	--	307,944	2
Paraiba	1,286,841	38,688	1,325,529	7
Pernambuco*	3,809,655	328,000	4,137,655	23
Piaui	1,455,912	25,750	1,481,662	8
Rio Grande do Norte	2,613,031	21,128	2,634,159	14
Sergipe	982,774	32,945	1,015,719	6
	<hr/> \$17,412,785	<hr/> \$ 578,771	<hr/> \$17,991,556	<hr/> 100

\* Dollar figures are derived by converting cruzeiros to dollars at exchange rate at date of disbursement.

#### D. Quantitative Results in Terms of Costs

While inflation was the major reason for shortfall, the figures we have been able to put together tend to suggest that the cost of the various items bought under the program was somewhat high but not seriously excessive. Our investigations indicate that quality primary schools in Brazil can be built by the Northeast States for an average of \$3,500 per classroom. On this basis, schools of 2,941 classrooms built or renovated under the program (calculating the 40% renovated at half price or \$1,750) would have a value of some \$8.3 million; the other 45 major structures (normal schools, supervisory or training centers) built or renovated would add (at an estimated average value of \$60,000 each) \$2.7 million.

Accordingly, it is probably fair to say that the buildings constructed under the program are worth around \$11 million. The equipment procured would run to several million more so that over half of the program's \$25 million of expenditures are represented by buildings and other tangibles. Training expenditures and administrative costs were the other substantial items of expenditure.

TABLE 4  
ANTICIPATED AND ACTUAL ACCOMPLISHMENTS  
FOR ALL STATES

(as of December 31, 1969)

	<u>Planned</u>	<u>Actual</u>	<u>Shortfall</u>
Classrooms			
Built & Renovated	15,595	2,941	- 12,654
Normal Schools			
Built & Renovated	47	9	- 38
Regional Supervisory Centers			
Built & Renovated	66	26	- 40
Teacher Training Centers			
Built & Renovated	22	10	- 12
School Kitchens			
Built & Renovated	50	600	+ 550 <u>1/</u>
Industrial Arts Shops	57	13	- 44
Medical-Dental Units	48	11	- 37
Equipment:			
Sets of Classroom Equipment	15,595	5,996	- 9,599
School kitchens	2,950	1,701	- 1,249
Industrial arts shops	57	8	- 49
Medical dental units	68	30	- 38
Normal schools	44	21	- 23

1/ This increase is apparently due to inclusion in actual accomplishments of kitchens built in new schools constructed. Note below that there was a shortfall in kitchens equipped.

TABLE 4  
(continued)

	<u>Planned</u>	<u>Actual</u>	<u>Shortfall</u>
Equipment: (continued)			
Supervisory centers	114	110	- 4
Teacher training centers	24	17	- 7
Vehicles	220	206	- 14
Training:			
All personnel regardless of level	23,060	13,926 <u>1/</u>	- 9,034
Certified primary school teachers	N/S*	3,919	
Lay primary school teachers	N/S*	6,867	
Ginasio teachers	N/S*	998	
Supervisors	N/S*	653	
Primary school directors	N/S*	1,074	
Normal school teachers	N/S*	415	
Instructional Materials: <u>2/</u>			
Children's books	N/S*	138,269	
Teaching materials	N/S*	13,862	

\* Not specified in all states

1/ These figures are somewhat overstated in terms of number of individuals as many teachers attended more than one course. The course lengths averaged 4 months, the total number of academic years of training was around 6,000.

2/ These figures do not include books supplied under the national USAID-supported COLTED program.

PART FOUR  
PROGRAM IMPACT

At its initiation the SUDENE/AID program was the largest and most sweeping project in education that Northeast Brazil had ever experienced. Today it is looked back upon as the ushering in of a new era of hope that public education in the Northeast could be vitalized.

This reaction to the program is not based solely on the contributions of the program as such. Among educators throughout the area there is a keen awareness of the shortfall between construction goals and what was actually accomplished. However, it is felt that the program placed a focus of attention on education that has continued undiminished. Education authorities find it easier now to get support for their programs from the states and even from municipalities, and that more support is also forthcoming from the Federal Government. One State Secretary put it in these terms: The State and Federal Governments could not do less than a foreign agency.

In a very broad sense, therefore, the SUDENE/AID program can be considered a major contributor to the sum of progress that has been made in elementary education during the 1962-1970 period. Beyond this there remains to be examined in detail specific contributions of the SUDENE/AID program in the context of this progress. This part of our report is devoted to such specific examination.

I. Increased Enrollment  
and Better School Facilities

During the period 1963-1968 primary school enrollment in the Northeast increased from 2,220,000 to 2,980,000, or 34%. This resulted in an increase in the percent of children in the 7-11 year primary school-age group enrolled in school from about 45% to 55%. There was probably also a small decline, despite population growth, in the absolute number of children in this age group not enrolled in school; however, statistics are not sufficiently satisfactory to be certain on this point. (See Table 6 on following page).

Distribution of primary children by school administration is shown in Table 5 below:

TABLE 5  
DISTRIBUTION OF PRIMARY SCHOOL ENROLLMENT  
BY ADMINISTRATION, NORTHEAST BRAZIL  
(1963 and 1968)

Year	Total Enrollment	Federal Schools	State Schools	Municipal Schools	Private Schools
1963	2,221,902	3,249	865,569	976,300	376,784
	100%	.1%	39%	44%	17%
1968	2,984,808	16,251	1,189,156	1,433,098	346,343
	100%	.5%	40%	48%	11.5%
% change 1963-68	+34%	+400%	+37%	+47%	-8.7%

Source: Anuario Estatística do Brazil, 1966, 1969

TABLE 6

Primary School Enrollment of 7-11 Year-olds  
at the Beginning of Year  
as Portion of Total Age Group  
Northeast Brazil 1963-1968

	(1) Total Pop. of Nine NE States*	(2) Total Population 7-11 years [13% (1)] **	(3) Total Primary Enrollment***	(4) Total 7-11 yr. Enrolled In School [62.8% (3)] +	(5) % of Age Group Enrolled	(6) Number Of Age Group Not Enrolled In School
1963	23,535,000	3,059,000	2,221,972	1,395,398	45%	1,663,603
1964	24,016,000	3,122,000	2,450,850	1,539,133	49%	1,582,867
1965	24,531,000	3,189,000	N/A	N/A	N/A	N/A
1966	25,058,000	3,257,000	2,497,637	1,568,511	48%	1,688,484
1967	25,601,000	3,328,000	2,701,065	1,696,268	50%	1,631,732
1968	26,154,000	3,400,000	2,984,808	1,874,459	55%	1,525,541

\* Instituto Brasileiro de Estatística, Anuario Estatística do Brasil 1969. All figures exclude Minas Gerais.

\*\* 13% was derived from the CELADE data on Brazil.

\*\*\* Anuario Estatística do Brasil 1969, 1966. Enrollment is for beginning of the school year. This figure does not include those who may drop out or change schools during the school year. Federal, State, Municipal and private schools are included.

+ 62.8% is same proportion as used by USAID/B/HRO in "Brazil, Development of Education: Analysis", October 1970.

These figures must be used with great caution since they are based on the 1960 Census which allegedly contains many errors. In addition, the proportion of the population in the 7-11 age group is assumed to be the same for all years even though mortality rates for infants and children have decreased substantially over the period.

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The primary cause of the increase in enrollment occurred in the municipal school system. These systems increased their enrollment by 47% from 1963 to 1968. The increase was sparked by a number of factors. One was higher municipal revenues resulting in part from economic growth and in part from Federal Government revenue policies. Another was substantial provision of grants to the municipalities for education by the Federal Government. A third reason reportedly was action by the Federal Government to bring to book a number of mayors who had been making inappropriate use of funds - and the example this gave to others. Finally, there exists at the local level an obvious desire for schools. The provision of elementary schools is not only a major function of municipal government; it is politically popular.

Growth in the State system elementary school enrollment was somewhat less substantial - about 37%. Here the factors were a combination of the SUDENE/AID program, the efforts of the States themselves, and grants of the Federal Government. Clearly a reason why the State elementary systems grew less than the municipal is that the States were expanding all levels of their educational systems, whereas the municipalities (though some were expanding secondary schools too) concentrated heavily on the elementary sector. (Thus, for example, while Federal grants to States for education were higher than to municipalities, the impact of Federal funds at elementary level appears to have been more extensive with respect to the municipal system).

While we have pointed out above the serious shortfall in new schools constructed under the AID/SUDENE program compared

with those planned, nonetheless the impact of the program on the State system was very substantial. The 2,900 classrooms built or renovated under the program, based on average class loads of 30 students, would provide spaces for 87,000 students. However, a large proportion of schools are used for two and occasionally even more shifts. If this is taken into account, it would be possible to estimate the number of spaces provided at about 140,000. This is a rather generous figure as about 40% of the 2900 classrooms were renovated rather than constructed under the program; without the SUDENE/AID program most of these classrooms would probably have been kept in use in any event with or without repairs. However, comparing the 140,000 figure with growth in enrollment from 1963-68, it may be concluded that the SUDENE/AID program either provided or assured space for approximately 40% of the increase in State system primary school enrollment and 4.7% in total 1968 primary enrollment in the Northeast.

There have been criticisms in the past that some schools were built in locations where there are insufficient students or otherwise that they were not promptly and fully utilized. To the extent we were able to check by observation, we found on the contrary that utilization was very high. In discussions with State Secretariats, we learned that initially a number of schools constructed under the program were underutilized because their locations had not been well chosen. However, we were informed that with rare exceptions all schools are now well employed. Enrollment statistics tend to bear this out to the extent we were able to check them. In consequence we believe instances of serious underutilization (though probably occurring in some small schools in poorly populated areas) cannot be significant. A recent USAID/Brazil audit of the Pernambuco program

tends to bear out this conclusion.

Further the quality of the schools is very good in construction and equipment compared with the average school facility available in the Northeast. Most schools in the area, especially smaller ones, are modifications of buildings not originally intended as schools or of rather makeshift construction.

During the course of our study we visited about 30 schools built under the SUDENE/AID program. We found them to be sound structures, with cement walls and tile roofs, very adequately designed to serve the instructional program. Principals and teachers were generally satisfied with them - with relatively few complaints. Some faults were noted such as one school in which rain blows into classrooms, poor placing of lights in play areas resulting in breakage, etc. A more serious problem in our view was extremely poor electrical lighting, wholly inadequate for courses of evening instruction (probably not planned but nonetheless given in many of the schools); the same problem obtains in schools built under other programs. Ventilation was less than satisfactory to suit our taste, but within Brazilian norms. Permanent fixtures for filtering drinking water were generally evident though more so in Pernambuco than other states. Toilet facilities were good but shower facilities seemed generally unused. Kitchens were adequately equipped but utilization often broke down for one reason or another. Some school administrators are more conscientious and ingenious than others. There was often a lack of sugar, which sometimes resulted in suspension of the school lunch program as it is necessary to add to the mixture of flour

and powdered milk to make it acceptable to children. Adequate facilities were not always used for storing Food for Peace. Occasionally there was deterioration and in one school the principal kept supplies in her home. Dental units were effectively used - but on what we would consider a strictly part-time basis. Classroom equipment was good in basic student and teacher desks and chairs and blackboards. The schools are often surrounded by walls in a questionable attempt to combat vandalism. In one rural area visited during vacation period families were living in the schools. There was no playground equipment.

The AID/SUDENE schools are about on a par with other schools built as schools under purely Brazilian programs. Many of the latter are more attractive, especially newer ones constructed of brick. School maintenance is everywhere very poor, and the frequent use of brick in schools built under other programs reduces deteriorating appearance and maintenance problems.

We have explored the question as to whether construction under the program has had carry-over value in improving school construction by the Brazilian states under their own program or programs financed by the Federal Government. We found universal belief that the SUDENE/AID program had imparted new and improved school construction techniques - except at the one point that really counts. Those currently in charge of primary school construction for the states indicate that they are unaware of any know-how acquired under the program. Indeed, many of them know nothing whatever of the SUDENE/AID construction program. Nor did we see any school built by the State under other programs

that looked like a SUDENE/AID school. As observed earlier, schools built under the program were constructed under the aegis of special commissions established in each State Secretariat solely for administering the program. In most cases these special organizations have been disbanded without any of the personnel going to the organizations which build schools on a continuing basis. A case in point is the construction department of the Secretariat of Education of Bahia, which built schools before, during and after the program. All it knows about the schools built under the program is that responsibility for maintenance over them has recently been assigned to it. In Bahia also a new organization has been formed under the PREMEM group, which is to administer the First Sector Loan to Bahia. This group is proceeding on a basis which does not appear to be drawing on local experience of the State's regular construction group.

During our visits to the respective states we found no evidence that State Secretariats or other state construction authorities interchange any information or plans with respect to school building construction. As many conditions are similar from state to state, it would appear that some such interchange would be useful. We were struck, for example, with the fact that Maranhao considers the use of brick from Piaui to provide the best construction for the money, whereas Piaui continues to use cement.

Nonetheless, many states are developing and utilizing standard designs well suited to the instructional program; the schools

they build are attractive and appear well-constructed; the wide use of brick simplifies maintenance; and the costs are generally lower on a per classroom basis (NCr.10,000 on to 25,000) than under the SUDENE/AID program. Our conclusion is that technical assistance in primary school construction is probably one of the things needed least by the states of Northeast Brazil today. Where construction is poor it is the result of experiments (generally not repeated) to cut costs rather than lack of ability to construct adequate schools.

## II. Improvement in Management Capability

### A. GENERAL

The impact of the SUDENE/AID program on the State Secretariats was characterized by one Secretary as a "positive experience". By this was meant that as a result of the program the Secretariat was able to form a group of people to staff its activities more adequately and come into possession of a great deal more data relative to educational problems in the State than it had previously had. Essentially the same point was made by other Secretaries and key officials throughout the area.

The extent of change that has taken place over the past seven years is evident in part from the substantial increase in Secretariat staffs. Several independent estimates in Pernambuco, for example, agree that the Secretariat grew to about eight times the original personnel strength.

While the SUDENE/AID program provided the impulse to this development of State Secretariat capability, certainly it cannot be credited with the total development. For growth has occurred not only in divisions of the secretariats concerned with elementary education and related matters, but in other divisions as well. However, amplification of the Secretariat functions began generally with units concerned with elementary education and other activities related to implementation of the SUDENE/AID program. In Bahia, for example, the team was told that the entire Department of Elementary Education owes its origin to the program.

Aside from the needs brought forth by the AID/SUDENE program, the participant training program (Section III, pp. 120-130 below) contributed significantly to developing personnel to man important posts. Trainees are highly visible in every Secretariat.

The program also, of course, contributed some office equipment and vehicles. However, many other things have occurred to improve physical facilities. Several of the Secretariats have new buildings and even those still in converted quarters have greatly enlarged office space. The State Secretariat of Alagoas is not only well housed and equipped, but conveys an impression of modern and well-ordered office organization.

A contribution of the SUDENE/AID program which is most difficult to assess is that made through the "Special Commissions" set up to administer the program. As pointed out earlier, these centered responsibilities in a special group which significantly duplicated functions of the regular organization. To a considerable extent, personnel assigned to these commissions have been absorbed back into the regular organizations, but in many cases they have gone on (or plan to) to other organizations.

Despite the general improvement, there is still much room for better organization and management of the Secretariats. Not all talented educators make excellent administrators, and there appear to be shortages of competent clerks and other auxiliary personnel and of management systems to use them more effectively. While appointments are more and more filled with regard to professional qualifications, politics is still a significant factor. The frequent changes of Secretaries, which often bring a

reshuffling of all department heads, cause serious discontinuities. Semi-paralysis of the organization can begin months earlier in anticipation of a change in administration; it can continue some months afterwards until a new Secretary is settled in and major personnel and policy changes made. Some states such as Pernambuco have had relative stability of personnel. Though political appointees, the Secretaries of Education with whom we talked were an impressive group, which appears to indicate the importance attached to educational programs by the Governors of the States of Northeast Brazil.

#### B. Planning Capability

The educational planning capability of the State Secretariats has conspicuously improved from the early 1960's to the present time. Most of the Secretariats recognize this and regard it as one of the chief benefits of the program that it forced them to learn how to develop information and make plans. Subsequently, of course, programs of the Federal Government have also required the making and submission of plans, so that planning has been an on-going experience.

There are, of course, various types and concepts of planning. What the States have learned to do best has been in effect "project planning" - the drawing up of detailed plans for the expenditure of funds provided under special programs, e.g., the SUDENE/AID agreement for school construction, teacher training, etc. In working closely with the States in helping them collect information, prepare planning documents in acceptable form to meet requirements, and to get them in on time (or more nearly so),

USAID/NEHRO has undoubtedly provided much valuable training.

The SUDENE/AID program did not, however, aim to deal with the broader problem of assisting the states to engage in comprehensive planning for their educational systems with balance among primary and secondary levels. Limited as it was to an elementary education program, USAID/NEHRO, though willing to be generally helpful, has not significantly involved itself with overall planning. SUDENE, which has taken a broader approach, has provided some assistance in this respect. However, it has not been extensive, and it is currently an open question as to what SUDENE's role will be in the future in relation to MEC.

There has, nonetheless, been significant progress in the states toward development of more comprehensive planning. Most of them have worked out multi-year plans in which they have set forth goals and priorities and endeavored to draw up programs and develop cost estimates. The goals set forth, however, are essentially shopping lists of things to buy such as classrooms, teacher training, etc. (sometimes quantified but without explanation, sometimes not) - very much along the line of the SUDENE/AID program agreements. One of the most extensive planning documents was the "Plano Internal de Educacao e Cultura" of the State of Bahia, which contains much good material, though it is more of a data collection than a plan.

In all the states there is a lacuna between estimates of needs, on the one hand, and specific proposals for doing things, on the other. To put it another way, planning consists of the two elements of (a) identifying needs with varying degrees of

qualitative and quantitative specificity and (b) planning for use of funds in accordance with these needs, but there is no (c) linkage between the two such that it is possible to see to what extent the programs planned fulfill the needs. Planning for Northeast Brazil's education is thus not goal-oriented except in a very general sense.

There are other more basic and less sophisticated problems, of which the following are major:

1. Planning is not closely related to funding, either because funding is not accurately estimated or because levels of funding are impossible to anticipate. The serious planning which has to do with the spending of money actually available - is a more casual process. Shortfalls between what is planned and what is done are so great that the original planning loses meaning.

2. Planning is probably more engaged in as a necessity to get funds and perhaps as a new vogue than as an internal management tool. Particularly where the Secretary may change as often as four times in five years, continuity in commitment to a plan is hard to establish.

3. At the present time no State Secretariat is really sure what kind of planning is expected of it. There are, for example, as many different interpretations of what MEC intends as "fundamental education" as there are States, and perhaps even State officials, with the exception of those that don't try to interpret it. This is hopefully a transitory factor, but one which points out the urgency of establishing clear federal policies to which state planning can be related.

4. Planning is essentially a composite of piecemeal planning (e.g., so many classrooms, so many teachers, so many training courses, etc.) rather than system designed. In other words it lacks the element of determining the most cost/effective means of achieving specified results in terms of output of the educational system as a whole or of its sub-systems.

5. Planning is not developed on an adequate statistical base. This problem may, however, be less serious than commonly thought. The most important thing states need is good school statistics, municipality by municipality, and related data on school-age population. Though there is a definite need for improvement in the gathering of this information, the information is often already being gathered with considerable detail and in a basically useful manner; the problem is to refine techniques for greater accuracy and somewhat better detail.

### C. School Administration

Much has been done pursuant to the SUDENE/AID program to strengthen and develop the Departments of Primary Education during the past eight years. Personnel of these departments have been organized into a reasonable and apparently workable structure with specific areas of responsibility. Many staff are still part-time but at least the trend is toward full-time positions.

Many of the areas of work of these departments are more fully covered below in sections dealing with supervision, teacher training, curriculum development and the like. Our main concern in this section is with the area in which we believe these Departments (and indeed the Secretariats as a whole) are weakest -

perhaps in part because of their preoccupation during the SUDENE/AID program with the special programs such as training, supervision, and curriculum. This weakness lies in effectiveness of the organization and management of the school system.

In none of the States did we find school management well-organized. In some states all schools report direct to headquarters. However, headquarters does not always appear to pay too much attention to them. School principals appear highly doubtful as to the utility of communicating with the Secretariats, and the downward flow from the Secretariat does not appear well-organized either. This is most conspicuous in the area of school maintenance; there is indeed no State which as yet even professes to have worked out an adequate maintenance system. From the appearance of a large number of schools, this is obvious; it would be even more obvious if many schools were not able to scrounge some help from the municipal governments or other local sources. Other administrative problems, though less visible than maintenance, involve the same problems. There is a great deal of recognition of this within the Secretariats themselves; for example, it was usually estimated that it would take "years" to get a new curriculum applied throughout a system.

Regionalization of control of the school system has nowhere developed in an effective management sense. Some states have regional "delegadas", which have administrative and financial functions with respect to elementary school in their regions. They do not, however, appear to be charged with exercising substantive control. How well these delegadas work is questionable.

In Bahia, for example, which had the system, the Director of Primary Education was concerned because he did not know where his teachers were.

In most states, and sometimes side by side but unrelated with the delegadas, are regional teacher supervisory centers (discussed further in Section VI, pp.144-152). These however, generally cover only a portion of state schools and either have no line authority with respect to schools in their regions or only vestiges of it.

We also have the impression that Secretariat officials rarely visit their schools in the interior (partly perhaps because many have other part-time daily jobs). Information as to whether an interior school is open or closed (or the reason therefore) is not readily to hand. We suspect this as a factor leading to some overstatement in school enrollment statistics.

Direction at local school level throughout the system is universally regarded as seriously deficient. When school direction is poor almost everything can suffer - the tone of the educational environment, the maintenance of discipline, the conscientiousness and motivation of teachers and pupils, the records on which higher authority depends, the effectiveness of use of teaching materials, the proper conduct of a school lunch program, school attendance and the cooperative attitudes of parents and the community, the achievement of optimum use of school facilities, the effectiveness of teacher supervisory systems, and the possibilities of effective implementation of educational authority policies.

To make the point more specific, we can refer to the oft-noted problem that instruction suffers because of lateness of teachers in coming to work and the frequency of substitutes. In a well-run system with adequate policies and adequate school direction this could be brought under reasonable control. The fact that it is not makes obvious the extreme weakness of administration.

Again, we have noted the frequent comment that parents are not interested in schools and feel no responsibility towards them. In our opinion well-administered schools in Brazil do reasonably well in deriving parental and community support - though conditions of poverty in many areas impose serious limitations.

School principals, however, still appear to be named very largely on a political basis and with limited regard to their qualifications for school administration. Nor does anyone really seem to be supervising them. There has been some limited progress in training for school administrators (as will be noted in Sec. IV, p.131 covering SUDENE/AID contribution in this respect) but it has not been sufficient to bring about consequential change.

During our school visits we met some school principals who impressed us not only by their presence and knowledge, but by the orderliness and attention to good management shown in every aspect of school administration. Discipline was firm, but so also was attention to the needs of children in such respects as school lunches and books. They would deserve excellent efficiency

ratings anywhere. In other schools, however, there was a lack of effective direction which sometimes bordered on chaos.

The development of systems of school administration whereby the State Secretariat can and does exercise effective leadership and control over the units of the system (and conversely provides essential support) is one of the most obvious and urgent needs to increase the effectiveness of use of school funds.

#### D. Personnel Policies

At various points in this paper we have touched upon personnel policies. We desire to give it the emphasis of a separate section because it needs attention as a problem in itself rather than purely in relation to other aspects of school administration discussed above.

Over the past eight years there has been considerable improvement in personnel policies. Politics has become less important in the filling of substantive positions in the Secretariat and in the schools requiring professional pedagogical preparation. The same progress, however, does not appear to have been made with respect to administrative posts, which it is more commonly considered that anyone can handle.

With respect to teachers several states now require normal school certificates of all the elementary teachers in the State system - and where they can, some municipalities have followed suit. Nonetheless, a normal school degree is not a guarantee of a good teacher. More carefully formed policies to screen candidates and to evaluate them carefully during probationary periods would be desirable - especially in areas where certified teachers

looking for work exceed by many times the number of vacancies.

Again, with respect to lay teachers, the emphasis of the States and the SUDENE/AID program has been training. At least equal emphasis needs to be placed on standards of selection both in the State systems (where lay teachers are still used) and at municipal level. As noted below much training has been wasted effort, in great degree probably as a result of poor selection processes.

As a means of getting more normal school teachers into the interior, several states are paying higher rates to normal school graduates who will teach there. On the other hand, many authorities including some Secretaries of Education, question this on the ground that good lay teachers will be more effective than city girls transplanted to poorly developed areas. Studies need to be made as to what personnel policies or combinations of policies will lead to the best results.

Currently teachers and principals are often allowed to work only one shift (3 to 4 hours). A large proportion of these principals and teachers take second jobs in another school. We have found that many of them (to save bother and transportation time) would be willing to work two shifts in the same school or job for less than the aggregate of their two salaries if the rules so permitted. The possibility of offering teaching positions at longer hours would appear at least to merit consideration.

Teachers salaries are extremely low. However, the keen competition for teaching jobs in many areas suggests this is not a universal problem in terms of securing qualified staff. The main difficulty seems to be abnormally low salaries paid lay

teachers by many municipalities. The establishment of some practical minimum by the State could perhaps go a long way toward upgrading the quality of lay teacher candidates available.

In this connection the Public Administration Office of USAID/NE is working on a project to develop salary scales for municipal teachers in Pernambuco.

Another problem is that many teachers have permanent status and cannot for all practical purposes be fired. While Brazilian custom in this respect may be very strong, there may well be some latitude in strengthening personnel rules as to probationary periods, eligibility for pay increases, etc. that would assure a greater control over teacher performance.

An effective policy governing classroom attendance by teachers and the use of substitutes appears to be lacking. Substitutes appear to be handled on a haphazard basis with no lists of those available. As a result there is a high degree of discontinuity of instruction in the classroom which has been frequently cited as a cause for poor pupil performance.

We heard only moderate complaints concerning slowness in payment of teachers salaries in State schools. In this respect an advance seems to have been made over conditions earlier obtaining. to which provisions of the SUDENE/AID agreements requiring States to pay teachers may have had a salubrious effect. Payment of municipal teachers is often deplorable.

Thus, while some substantial progress has been made, there is need for further effort to establish adequate personnel policies.

## E. Management of the Municipal Systems

Municipal administration at its best is equal to the States and there are some outstanding municipal primary schools. However, in other municipalities, where even the mayor may not have a secondary education, the deficiencies can be glaring. Stories are told of some mayors who pay their teachers under 20 cruzeiros a month and wonder if it may not be too much. In varying degrees, however, the municipalities try to follow along the path of the generally more progressive state system. More and more municipalities are starting to pay their teachers on a par with the states (at least for normal school graduates), though appointments generally seem to be still largely casual and political. Some municipalities have developed small secretariats of education which are very well informed on the local school situation.

While the SUDENE/AID program has made very little direct input into the municipal system and none at the level of management and planning, 1/ it has indirectly contributed through a trickle down from the example of the State system and through the improved capability of the State Secretariats, which enables them to deal with the municipalities more constructively.

We have found particularly gratifying a growth in State-Municipal cooperation in elementary education. Mayors are usually anxious to have a state primary school in their municipalities; it reflects credit on them and eases the strain on the local exchequer; presumably also they have some say in

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1/ It should be noted that mayors built many of the SUDENE/AID program schools, and are credited in at least in audit report with doing it more efficiently than private contractors.

appointments; conversely, the State Secretaries have little desire to operate schools in isolated areas and some in fact consider that at some point primary education should become a completely local responsibility.

The State of Pernambuco has passed legislation that constitutes a first step in establishing standards and improved administration for municipal school systems. In all states there are a large number of agreements between the State and certain municipalities providing for cooperation of many kinds in school construction, cost sharing, and administration. During our visit in Maranhao, the Secretary had a conference of mayors at which a decision was reached to change the term of the school year in rural areas so as to avoid conflict with the farming season and thus reduce school drop-out. In varying degree all States cooperated with the municipalities with respect to such programs as teacher training and supervision and by providing some measure of technical assistance.

The Federal Government, beginning in 1971, will make educational grants to municipalities only through the States rather than direct. This is a step in the right direction to achieve greater harmony and planning consistency between the two systems under state leadership.

It is however, clear that if objectives of fundamental education are to be satisfactorily achieved, the municipal system, which will train a large portion of ginasio entrants, must be upgraded along with the State. Support for actions along this line should be considered as of key importance in the development of future AID policies.

### III. PARTICIPANT TRAINING

One of the major thrusts of the SUDENE/AID program was the training of personnel and the establishment or improvement of institutions for such training. The principal aspects of the strategy were (1) "participant training," largely of State Secretariat personnel and normal school teachers; (2) training (essentially in-service) for elementary school teachers, supervisors and principals, largely through establishment of training centers; and (3) improvement of normal schools. The establishment of supervisory centers may be also included, since their function is largely to provide on-the-job counsel or training to teachers. While these four aspects interweave, we shall try for clarity to treat each distinctly, while noting significant interrelations, beginning in this chapter with "participant training".

#### A. Description of Program

Since 1963 about 190 Northeast Brazilian educational officials and state normal school teachers have been provided with courses in the U.S. or other countries under programs associated with the SUDENE/AID program. The vast majority (92%) have returned to continue work in their previous positions or in education related jobs.

The participant training program administered by USAID/NE/HRO represented the most advanced training provided as part of the assistance plan for State Secretariats. In addition, some officials and teachers were sent to Brazilian institutions such as PABAE in Belo Horizonte and CRPE-Sao Paulo for special

training. Funding for this in-country training usually came from program funds obligated to States. Occasionally when State Secretaries were reluctant to spend program funds for advanced training in Brazil, a direct USAID/NE/HRO-PABAEE contract would be made. A small part of the total participant training was for secondary and adult education. However, the following narrative relates only to the elementary education program trainees.

Program costs are summarized in Tables 7, 8 and 9 below. These represent dollar costs only, and do not include local currency expenditures for per diem or instructor costs for language training and international travel.

TABLE 7

TOTAL U.S. AID/NE EXPENDITURES TO MAY 10, 1970FOR ALL PARTICIPANT TRAINING IN EDUCATION

<u>Fiscal Year</u>	<u>(1) Ele. Educ.</u>	<u>(2) Secondary Education</u>	<u>(3) Adult Educ.</u>	<u>(4) Voc. Educ.</u>	<u>(5) Total</u>
1963	\$ 6,800	\$	\$	\$	\$ 6,800
1964	19,000				19,000
1965	294,700				294,700
1966	223,950	8,000	30,000	8,500	270,450
1967	102,120				102,120
1968	83,100				83,100
1969	140,000			35,800	175,800
1970	<u>124,500</u>			<u>18,000</u>	<u>142,500</u>
	\$994,170	\$ 8,000	\$ 30,000	\$62,300	\$1,094,470

\* An additional \$186,000 was obligated by June 30, 1970, bringing the total to \$1,280,470. The categories of obligation could not be determined.

Source: USAID/NE/HRO files 5/11/70

TABLE 8  
APPROXIMATE EXPENDITURE PER STATE  
AND ADMINISTRATIVE UNIT AS OF APRIL 30, 1970  
FOR ELEMENTARY EDUCATION

	<u>Cost 1/</u>	<u>% of Total</u>
SUDENE	\$ 9,500	.9
DALY/ECISA <u>2/</u>	19,000	1.9
Maranhao	79,350	8.0
Piaui	35,790	3.6
Ceara	112,340	11.3
R.G.Norte	94,445	9.5
Paraiba	56,665	5.7
Alagoas	121,280	12.2
Pernambuco	194,855	19.6
Sergipe	53,680	5.4
Bahia	157,000	15.8
M. Gerais	69,590	7.0
TOTAL	\$ 993,495	100.0

Source: Derived from USAID/NE/HRO files

1/ Does not agree exactly with column (1) of preceding table because of different method of computation.

2/ Related to school construction

TABLE 9  
PARTICIPANT TRAINING  
PURPOSE AND DURATION OF TRAINING BY STATE  
AS OF APRIL 30, 1970

	Training Completed 12-18 Months Specialization	Training Completed 2-3 Month Seminars					Now in Training		
		VIP Team	School Constr.	School Admin.	Student Teaching	CEPAL Plan.	Edu. Fin.	In-train. 12-18 Months	Student Teaching 3 Months
SUDENE	-	-	2	1	-	2	-	-	1
Daly/EC ISA	-	-	1	-	-	-	-	-	-
Maranhao	8	1	1	-	2	1	1	-	-
Piaui	3	1	1	1	2	-	-	-	-
Ceara	11	1	-	1	2	1	1	-	2
R.G. Norte	9	1	1	1	3	-	1	-	1
Paraiba	5	1	1	1	2	-	-	-	2
Pernambuco	20	2	1	1	3	-	2	-	2
Alagoas	12	1	-	1	4	-	1	-	1
Sergipe	4	1	1	1	2	-	-	1	-
Bahia	15	-	1	1	3	1	1	1	1
M. Gerais	7	1	1	1	1	-	-	-	-
TOTAL	94	10	11	10	24	5	7	2	10

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Alagoas may be used as an example of what the training funds purchased. The first participant from Alagoas was the Director of the Department of Education in the Secretariat. He attended the seven-week VIP observation tour in Mexico and the United States in September 1964. At present, he is a professor at the University of Arizona. Eighteen months later a second participant was selected for a ten-week study-observation trip to Southern Illinois University. She returned to her position as Chief of Training of Elementary Education. In December 1966 eleven participants were selected from the Division of Curriculum and Supervision of the Secretariat for a 12 month academic bilingual program at the University of Wisconsin (Milwaukee). Most of these participants returned to their original jobs. The curriculum revision in Alagoas was completed, for the most part, before the departure of the trainees. They have played an important role in the implementation of the new courses of study.

During the same period, the advisor on education planning and programming attended a one year academic course at UCLA in school administration. He is now Chief of Education Planning and Programming in the Secretariat. Subsequently 3 normal school teachers have been sent on the student teaching team for 3 months observation at National College of Education and Penn State University. A final participant was sent to a two-month observation study visit to University of Wisconsin (Milwaukee) on school finance.

## B. Objectives of Participant Training

Participant training has been administered by USAID/NE/HRO with assistance from SUDENE training division in making selection of participants. At present a productive and cooperative relationship between NEHRO and SUDENE exists, although at the beginning of the program differences of opinion about the use of training funds created conflicts. Specific objectives for the program as a whole or for each state were not established at the beginning of the program. This approach coincides with the absence of specific objectives for qualitative changes expected in the secretariats as a result of the program.

In 1964 SUDENE submitted its suggestions for use of participant training funds. Based on a poll taken of the State Secretariats of training needs and SUDENE's assessment of their ability to utilize training, they recommended that training outside Brazil should be confined to employees of national or regional agencies such INEP, SUDENE, DAP, CRPE-Sao Paulo. Areas of attention proposed were (1) supervision, curriculum and methods for technicians of INEP or DAP, (2) education research and statistics for CRPE-Sao Paulo employees or equal level, (3) audio-visual methods for INEP or equivalent technicians, (4) education programming and planning for SUDENE employees having completed courses at CRPE-Sao Paulo and (5) adult literacy for appropriate regional and national agencies.

SUDENE maintained that state employees could profit most from training in Brazil. This position is maintained today and is supported in part by some State Secretariats interviewed by the team. AID, on the other hand, was more interested in sending

to the U.S. those people who occupied key positions in the Secretariats or were likely to do so on their return. The AID approach prevailed.

A comparison of the SUDENE poll in 1964 and an AID poll of the states in 1968 shows the areas of greatest interest and the changing priorities over the most active period of the program. These polls are shown in the table below.

TABLE 10  
Training Priorities as Seen by State  
Secretariats 1964-1968

<u>1964</u>	<u>1968</u>
1. Supervision, curriculum methods	1. General administration
2. Teacher training	2. Practice teaching (normal schools)
3. Adult literacy	3. Planning
4. School lunch	4. Education psychology
5. School construction	5. Methods
6. General Administration	6. Curriculum
7. Statistics and research	7. Finances
8. Audio-visual methods	8. Supervision
9. Programming	9. Research
10. Industrial arts	
11. Pre-primary teaching	
12. Extra-curricular activities	
13. Exceptional education	

Source: USAID/NE files and interview with Teresinha Piancastelli USAID/NE/HRO.

As discussed elsewhere in this report, curriculum revision and establishment of supervisory systems have had high priority in the program. They have dropped in priority as Secretaries believe that those programs are well established. Normal school curriculum and methods are accurately assessed as needing continuing assistance. The states' realization that more training is needed in administration, finances and planning is an important attitude change and in large measure can be attributed to the planning and administrative requirements of the SUDENE/AID program and the increasing flow of federal funds to the states.

### C. Results of Participant Training

State Secretariats were in agreement that returned trainees had made important contributions to improvements in the educational system. Specifically mentioned were curriculum revisions, improved supervisory systems, and more practical normal school curricula, especially practice teaching. Also mentioned by the Secretaries and some of the participants themselves was the fact that even a short trip to the U.S. opens up new perspectives and provides the basis for seeking reforms. A familiarity with U.S. textbooks, teaching and testing methods, exposure to new educational technology such as T.V. were cited by state officials as being very important in planning changes in traditional techniques. Of the short-term courses, specific praise was offered of the ECLA course in education planning held in Santiago. The normal cultural and language barriers found in U.S. universities were avoided and the course dealt with the specific reality of developing countries.

While the state secretariats and others praise the participant training program they readily pointed out some of its weaknesses. Most frequently cited was the inapplicability of much of the U.S. experience to Northeast Brazil. For this reason, several of the state secretariats would agree with the SUDENE approach: trainees should be given the highest possible training in Brazil before being sent abroad.

The evaluation team noted the almost universal high regard held for PABAEE both as a center for study and a source for qualified technical assistance. This was in marked contrast to the sometimes mixed reaction to the usefulness of study at U.S. universities.

Another weakness pointed out by state officials and especially by the former trainees was the language facility of the students. Even after AID began an intensive language course in Recife for prospective participants, many were unable to pass the test and many who passed it did not feel at ease in the U.S. classroom. Achieving adequate command of English has been especially difficult for people from the less-developed states such as Piaui and Ceara. Contributing to this language problem has been a reluctance by some state secretariats to grant leave with pay to an employee for one to three months of full-time English study. AID pays a small per diem, but lack of support from the Secretariat can be demoralizing. The team was unable to determine how often this has happened.

Since the returned participants have probably received the most advanced or at least the most prestigious training of all Secretariat employees, the team expected that they would be the

most articulate spokesman for reform. The team found that the performance of the returned participants was uneven. In some cases the trainees could be specifically cited as instigators of reform. In many other areas, their role in change was obscure. The team was surprised at the lack of direct and repeated testimony about the specific values of one year at a U.S. university.

Future plans for participant training in education will be directed at the improvement of newly formed Colleges of Education within the state universities. Reforms at this level should have impact on normal school teaching. Selection procedures will follow some of the original suggestions by SUDENE, i.e., training will be for university graduates only who are willing and able to obtain Masters degrees.

#### IV. TRAINING OF TEACHERS AND OTHER PERSONNEL

##### A. General Development

Teacher training underwent its real development in the Northeast during the 1962-70 period. Support for this development came in roughly equal measure from two sources - the SUDENE/AID program and the Ministry of Education (the latter through INEP and PAMP). The States also have been assuming an increasing burden, particularly with respect to operating costs.

There are now about 20 teacher training centers in the Northeast, of which nine were constructed or substantially constructed with SUDENE/AID funds and 17 equipped or substantially equipped with such funds. The SUDENE/AID program also provided some technical assistance with respect to organizing centers and their programs.

The SUDENE/AID program provided scholarship funds for 13,926 students (counting each student for each course, usually of 2 to 4 months duration). Combined efforts of MEC and the States have apparently been at least as substantial and, while full statistics are lacking training is being continued at a level that must be running over 5000 a year. (Useful statistics are difficult to compile, particularly as there are thousands more "trained" at very brief sessions or short courses.)

Our impression is that the capacity and level of activity of the training centers would be adequate for the normal needs of the primary education teaching corps of the Northeast (now

approaching 100,000) if all members were basically qualified. The problem arises as to its adequacy to carry the burden with any acceptable speed of significantly upgrading the qualifications of lay teachers, who comprise half the corps.

While the SUDENE/AID program generally confined itself to supporting the State system of primary schools, this was not true with respect to lay teachers. In this area the program had, in order to conform with program agreement targets, to deal with municipal lay teachers since there were not enough lay teachers in the state systems. Indeed, in the exceptional case of Pernambuco, the State system is entirely staffed with normal school graduates and some other states are moving in this direction.

The training program is concerned essentially with: (1) lay teachers; (2) certified teachers (normal school graduates in service); (3) supervisors; and (4) primary school directors.<sup>1/</sup> Because of its importance and the attention given to it we will discuss lay teacher training first, followed by description of other types.

### 1. Lay Teacher Training

The program of lay teacher training in the Northeast is one on which there is wide difference of opinion. The fact that over 50,000 teachers are lay, and that most of them (81%) have four years of schooling or less, is cause for great concern. It is widely recognized that this is a major cause of poor teaching and poor student achievement. On the other hand, as will

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<sup>1/</sup> The AID/SUDENE program also provided some support for training of ginasio and normal school teachers. However, the scope has not been sufficient to require individual evaluation.

appear below, the quality of normal school graduates is also under serious question. Many educators consider that a significant proportion of lay teachers are either better teachers or have the potential to become so if provided with adequate training and supervision. Other educators are almost equally convinced that it is not generally possible to make good teachers out of persons with four grades or less education; that it is a waste of money to try; and that every conceivable effort must be made to replace the lay teachers with normal school graduates. Still others stress the view that there is no foreseeable solution in the near future to attracting normal school graduates to the rural areas of the Northeast, particularly those that are poor and culturally isolated, where even transport or housing (other than shacks) is nonexistent. Therefore, they favor lay teacher training on the ground that there is no viable alternative. It is against this background of conflicting opinions and emphasis that the training of lay teachers has been proceeding.

To evaluate the lay teacher training program we take two approaches. The first is whether it is working to produce significant qualitative improvement in the teachers trained. The second is to raise the question whether training is being conceived on a sufficiently significant scale to provide a substantial solution to the "lay teacher problem".

On the first score we have only one piece of research to go on. This is a study by Dr. Alfred Bisset, "Efetos de una Programa de Trenimento", based on the SUDENE/AID-supported lay teacher training program in Alagoas. The conclusions of the study were:

- that the two month courses given were too short;

- that the curriculum was too extensive;
- that while the technicians of the Secretariat of Education had the "feeling" of achieving their objectives, the program was not effective;
- that children were not learning more language skills and mathematics as a consequence of the training of their teachers;
- that actually students of lay teachers without training were getting slightly higher

This is highly useful information to caution the need for careful testing to assure that results are real and not merely assumed. Unfortunately no further studies have been made. We asked USAID officers why the States had not done so and were told that they did not have the resources for it. We asked some of the States, and in some cases, were told they had applied to INEP for assistance but had no favorable response. (This is presumably the result of INEP's emphasis in recent years on training as opposed to its original research function - a trend that it is now proposing to reverse.) In Alagoas we understand that educational evaluations are being undertaken, which may throw light on revised and extended training methods.

At present there are programs of training lay teachers by bringing them in to a training center for three sessions of about three months each - equivalent to an academic year. To the extent this is done it avoids the problem of too short training cited in the Bissett study.

An example of the three session approach is the training center at Nazare de Mata in the State of Pernambuco. Detailed observations on this center assembled from the notes of our team members' appear in Appendix I. Briefly, we were impressed with the

center's physical appearance and organization. With respect to the instructional program we felt that strong points were mixed with a great deal of unevenness. In our view the program did not bear evidence of a sufficiency of research necessary to establish and test objectives, teaching methodology, and course materials appropriate for the difficult teaching task that the center is charged with performing.

On balance, despite much discouraging evidence we believe that lay teacher training in some measure is productive. Our chief basis of judgment is that it is regarded as useful in certain areas where we believe that educators have a firmer grasp on what they are doing and are endeavoring to coordinate lay teacher training with other measures. We believe it is most productive with respect to teachers who have a reasonable intelligence and capability to begin with and who (which is not the case for the great majority of municipal lay teachers) are followed up with continuing supervision. With respect to many teachers, we believe it is wasted motion and wasted money to deal with a problem better approached through more selective and well-organized recruitment policies, particularly by municipal government that do not even try to maintain minimum standards of selection. We were frequently told that a considerable number of municipalities hire lay teachers only because they are cheaper than normal school graduates, not because the latter are not available. Further the program clearly requires strengthening by improved curriculum, methodology, and admission requirements.

The question now is to consider whether programs in operation are sufficiently extensive to offer prospects of solving the "lay teacher problem" in an acceptable period of time. As best we can learn, some 5,000 lay teachers are now receiving "training" each year - which presumably means a maximum of 3 months but with respect to many could mean a great deal less.

If we assume, however, that effective training of a single teacher should consist of 3 months training for three successive years, this could indicate a possibility of training 5,000 every three years. There are, however, 52,000 lay teachers in the Northeast. Thus it would presumably take at current rate about thirty years to train all of them, even if there were no turn-over or numerical increase in their numbers. In fact, however, new lay teachers must be entering the schools at a rate well in excess of an effective training rate of 5,000 every three years.

Through PAMP we understand that the Ministry of Education is planning to accelerate greatly the training of lay teachers. We have not directly evaluated the PAMP system, but we have substantial doubts as to the thoroughness of training provided. We are also unaware of any tests that have been made as to the efficacy of its methods.

More thorough analysis of the quantitative and qualitative aspects of lay teacher training is obviously necessary to determine the most cost-effective course of action which promises to afford a satisfactory solution in a reasonable period of time.

## B. Other Training

The SUDENE/AID program addressed itself to the problem of upgrading principals of elementary schools to the extent of providing short training courses for 1074 school principals. INEP also does some training of principals. In addition USAID/NE has also conducted a training course for school directors through its Public Administration program.

We met too few principals who have been exposed to this training to make any valid judgments as to its results. We believe that it has helped marginally. However, such training can be of greater value if it is closely keyed to a broad program to improve school system administration. Further, elementary school administration needs to be viewed as a profession to which attention is given in normal schools (possibly in the form of post-graduate courses) or university level to train people for full-time work rather than as a part-time activity often undertaken in conjunction with a part-time teaching post at another school. The problem, as indicated in an earlier chapter, is too serious to be left to short-term training to effect the major upgrading of this category of personnel.

The SUDENE/AID program also thoroughly established the principle of short-term in-service training for certified teachers and actually financed courses of generally two month duration for some 3919 of them. We believe this program is soundly conceived and highly useful. The time is sufficient to

"brush up" trained experienced teachers with discussions of new teaching methods and to enable them to learn from each other by discussion of practical experiences. Even if only a relatively small percentage can be provided with training each year, there should be a sizeable cumulative effect and some carry-back of new ideas to teachers who stayed at home. The program could be strengthened by carrying out a suggestion made to us by INEP that teachers returned from training in turn provide some in-service training to teachers in their local areas. All of this should be helpful to enable the State Secretariat and supervisory centers to get across improvements in pedagogical techniques, new curricula, etc., which they desire to introduce.

The SUDENE/AID program also provided training for 560 supervisors as well as assistance to INEP, which has a one-year training program for supervisors in Recife. While some of the courses were too short (three months) and the supervisors themselves desire further training, we believe on the whole the program has been very successful. Our impression is that candidates for supervisory positions have been rather carefully selected in most states for ability, so that the training program was reinforced by having good material to work with. The generally more modern and sophisticated outlook toward education and awareness of problems shown by the supervisors compared with the average teacher or school principal was marked. The potentialities of looking at the supervisory teaching corps as a potential field for selection and further training as school principals is intriguing.

One suggestion we would make with respect to all training courses is that there should be considerably more concentration

on books of particular value in elementary education and how to use them. The general tendency at all levels not to use books was to us particularly dismaying. There is also a complete lack of periodicals relating to elementary education in circulation within the teaching corps. If, as we think, the continuous reading and study of new materials is an important source of cultural enrichment it should first be implanted in the teaching corps.

## V. Normal Schools

Normal schools in Northeastern Brazil are not credited with having improved significantly since 1962. This judgment seemed to be shared by practically every educator with whom we talked. This included normal school graduates from teachers and supervisors to ranking Secretariat officials.

Dissatisfaction with normal schools in Brazil is by no means confined to the Northeast. A 1969 study by Pimenta based on 1305 cases concludes that:

1. Normal schools do not provide the teacher with specific professional preparation.

2. There is no adaptation of the teacher to individual difficulties or to the school reality.

In many schools so little practice teaching is offered as to be almost insignificant. While many normal schools have demonstration schools attached to them (in at least one case provided under the AID/SUDENE program), these are not well utilized. In some cases they are said to be too small to provide opportunities for practice teaching to the much larger number of normal school students; possibilities of teaching in other schools do not seem to be explored. The curriculum appears to be traditional with little effort at updating. There is generally no evidence of teaching of new teaching methods and curricula that the States are adopting. Although school principals are a weak link in the school system, few normal schools provide programs for training in school administration. The school libraries are often extremely deficient not only in pedagogical

texts but also in broad cultural materials that one would expect to find in institutions devoted to the spread of culture and learning. A well-organized normal school was the Escola Normal Estadual dom Bosco in Recife, which provides scientific and classical courses as well as normal.

The problem of the normal schools in the Northeast is not only that they do not prepare teachers well, but that they produce an oversupply in the big cities (where most of them are located), while the interior areas, to which city girls are not attracted, are starved for normal school graduates. Last year in Recife alone there were 5,025 normal school graduate applicants for 200 teaching vacancies. Thus the normal school system is completely out of step with primary system requirements. Many city girls go to normal school in lieu of ordinary colegios as stepping stones to non-teaching employment or the university. It would be much to the advantage of the Northeast if some of these schools converted to the teaching of courses (e.g., commercial) to prepare these girls for work in which there are shortages of skills.

There are some indications of impending change. In most of the States proposals have been advanced for making normal schools more relevant. These include plans to mix theory with practice, changing the criteria for entrance into normal school, and general updating of the courses taught.

While we find this encouraging, the pace of progress appears extremely slow - particularly when everyone concerned with the administration of primary schools complains of the lack of adequate preparation of normal school graduates whom

they hire. Further, little attention seems to be given to the need to develop more adequate normal school facilities in the interior. While few interior municipalities are of sufficient size to warrant normal schools, or at this point even there are a range of innovative approaches that could be considered to provide normal school or equivalency training in the interior to local girls who would undertake a teaching commitment. Perhaps a major factor adversely affecting improvement of normal schools is that they fall under the Departments of Secondary Education of the Secretariats, which are much more interested in the development of new ginasios and colegios than in normal school reform.

The SUDENE/AID program has addressed the normal school problem but only to a limited extent. An original program to build or restore 47 normal schools was cut back to nine. Some of those assisted are in areas where there is a surplus of normal school graduates available and the development of other types of secondary education would have been more useful. USAID work with the Secondary Education Departments of the Secretariats, which are responsible for normal schools, seems to have been modest compared with attention given to the primary level.

Notwithstanding, there has been significant recognition of need in this area. A USAID/NE/HRO internal memo of May 18, 1967, points up the need for reform of normal school curricula but states that USAID desk officers do not have time to give technical assistance to the States in this matter. A recommendation was made that USAID and MEC prepare a project to upgrade the 50 State normal schools in the region and that one American and two

Brazilians be assigned full time to this project.

Further, some of the current momentum to reform normal schools in Brazil is being generated by participants under the USAID participant training program (many of whom, as indicated earlier, were normal school teachers). One participant actively interested in normal school reform stated: "Only when I was in the United States could I see the failings of the normal schools here."

The program has also provided short training programs in Brazil for 415, and training in the United States for 41 normal school teachers.

## VI. TEACHER SUPERVISORY SYSTEMS

### A. Description

One of the major tools developed by the AID/SUDENE program for improvement of instruction was the development in each state of regional supervisory centers. While, depending upon the State, these centers frequently have certain administrative and inspection functions, their principal purpose is to supervise teachers to assist them in improving in-school performance.

At the present time there are some 80 supervisory centers <sup>1/</sup> in the State systems staffed with about 800 supervisors. In addition a system of teacher supervision for lay teachers, including those in municipal schools, has been established by MEC, through an organization known as PAMP (Program de Aperfeicoamento do Magisterio Primario). It is active in all states of the Northeast except Piaui. In some states PAMP works in collaboration with the state system; for example, in Maranhao the State Chief Supervisor is also chief supervisor for PAMP. In other states it functions independently. A few municipalities also have small supervisory systems.

State supervisors are in most, if not all, cases normal school graduates and have received some specialized training to work as supervisors. This training, a large part received under the SUDENE/AID program and also at the INEP center in

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<sup>1/</sup> On paper there are about 100, but some are not operating; the figure used here could be somewhat high.

Recife built with AID funds, ranges from three months (most common in Pernambuco) to an academic year (Maranhao).

Typically, each supervisor is responsible for working with elementary teachers in a group of schools. The supervisors also provide some liaison between the Department of Elementary Education in the Secretariat and teachers, particularly in the interior. Thus on the one hand they convey new policies, for example in explaining a new curriculum; conversely, they provide some feedback on problems existing in the local schools.

#### B. Impact of the Supervisory System

The effectiveness of the supervisory system for elementary education in the Northeast has not to our knowledge been the subject of any studies. Much of the favorable comment on the system seems to be based on the proposition that it is self-evident that supervision is a good thing and must be improving the quality of instruction.

Certainly the supervisory systems are held in high regard by most State Secretaries and principal officials concerned with elementary schools in the various states. Among other interested Brazilian educators, however, there is variance of opinion ranging from conviction that the programs are one of the most important advances in elementary education in the Northeast to expressions of reluctant concern that the systems are not really working. There is also evidence in several states that supervisory centers receive very inadequate support from the State Secretariats.

With respect to teacher attitudes, it is generally agreed

that when the system was started there was a tendency to regard supervisors as "inspectors". Supervisors appear, however, to be unanimous in considering that this attitude has disappeared. In talking with teachers, we were unable to elicit any criticism of the systems; on the other hand, it was a subject we always had to initiate and which brought forth little besides the general observation that supervision was helpful.

The best basis we have for believing that supervisory systems are having a constructive impact derives from our detailed conversations with supervisors in many states. While there was some unevenness of quality, we found generally that they were intelligent and perceptive and were approaching their job in a realistic manner--within the limits of the constraints upon them. In short, they were of a calibre that should be able to help teachers of lesser experience or background. In Pernambuco they seemed relatively young--but bright.

Some of the specific things supervisors are doing with teachers that can be useful are the following:

- a. Helping teachers to carry out new policies such as grouping children by age.
- b. Showing teachers how to make work plans and cover the ground required for their classes.
- c. Helping with disciplinary problems--substituting new methods for the old practice whereby the teacher reached a ready solution by simple expulsion of the student.

These and other supervisory activities are also credited by some observers with creating a more intangible result--making teachers more conscientious.

Nonetheless, the supervisory systems suffer from so many inadequacies and inefficiencies that their outreach is too limited to have the broad impact one would hope for; further in some states there is reason to have grave doubt as to whether their impact is proportionate to the cost expended upon them.

C. Inadequacies and Inefficiencies

The inadequacies and inefficiencies of Supervisory Centers are basically problems of program management and design. While they vary from State to State, the following are common:

1. Lack of transport. A supervision program is pointless if supervisors are not able to reach the schools they supervise. We found this problem particularly acute in Pernambuco, where supervisors had neither cars nor bus money to visit schools. At the Supervisory Center at Nazare de Mata, for example, there were 12 supervisors. During all but one month of a school year they had made a combined total of 344 visits to the 276 schools in their districts; of these two-thirds were concentrated in 56 schools located closest to the center, and most of these visits were due to a special program and not regular visits. The 220 more distant schools had received a total of only 131 visits. In Bahia the Secretariat of Education had taken away automobiles, provided under the SUDENE/AID program, from the Supervisory centers and transferred them to the Delgadas (regional elementary education administrative centers). Even at best a supervisory center will have only one vehicle--not enough to carry a dozen supervisors to distant points. Further, vehicle maintenance is

a problem, particularly in the interior, and a center's sole vehicle could remain out of service or without replacement for a protracted time. Bus money will help, but often service to many schools is non-existent or complex and infrequent.

2. Short hours. In many states supervisors work only a five-hour day. This means an ineffective use of training and continuing program orientation costs since it takes two supervisors to do the work of one.<sup>1/</sup> Further, a disproportionate amount of time is spent in travel rather than substantive work and, in schools with two or three shifts, it is impossible to make contact with all teachers. Many of the supervisors have a second job in the afternoon, principally teaching.

3. Inadequate numbers. It is commonly considered that there are an insufficient number of supervisors to go around. On the average, there is about one for every 100 teachers in the Northeast. Further they tend to work disproportionately with certified teachers rather than lay teachers, as the latter are more concentrated in remote areas; though frequently there is a policy to provide supervision for teachers in municipal schools, the State schools are given the most attention and the remote rural schools not visited at all. In at least one state, the remote rural teacher may come to the supervisor, but this appears to occur rarely. USAID/NE/HRO has estimated the total need for supervisors at 1 to 10 teachers, or some 9000,

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<sup>1/</sup> Since teachers also generally tend to have short hours, the number of teachers that must be reached is also substantial.

a ten-fold the current number.<sup>1/</sup> This would, however, require such expense (as well as recruiting and training effort to fill posts adequately) as to suggest at least consideration of alternative strategies.

4. Lack of Effective Administration of Schools and School Regions. The supervisory centers, though arms of the State Secretariats, are not in a position of line responsibility for the schools in their areas. Sometimes, coexistent with the centers, are "delegadas", which are regional arms of the State Secretariats to handle certain elementary school administrative matters. None of the Secretariats have, however, any decentralized "command posts" in the strict sense. The schools are essentially autonomous, reporting to a distant state capital. The administrators of these schools are, moreover, frequently political appointees and, in our observation--despite important exceptions--the weakest link in the abbreviated line of command. We regard it as highly significant that supervisors tend to regard administrators as people with whom they must deal tactfully but from whom they can expect relatively little help. In consequence, there is insufficient mutual reinforcement of effort between the school directors and the supervisors. Further, there is little the supervisor can do to improve administration in a school even though this may be a major problem affecting teacher performance and student learning. Conversely, the school supervisor may be called upon for help by the school director in an area in which

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<sup>1/</sup> Education in the Northeast, a Diagnosis, May 1967.

she has no clearly defined responsibility.

5. Insufficient Use of Supervisory System Potential. While State Secretariats may try to use the Supervisory system to accomplish certain pedagogical (or even statistical) objectives, we sense frequently that supervisory centers may simply be "left out of it". Even the USAID-supported COLTED program did not provide supervisory centers with sets of books such as were distributed to practically all elementary schools, nor could we locate (of around 100 we met) any supervisors who had had any training in the potential applications of this important resource. In some cases this has been partially remedied. By and large, however, Supervisors make no use of COLTED books in guiding teachers to improve their techniques and few can mention a single title.

D. Concluding Comment

To the extent that they reach the schools and are effectively utilized and supported by the Secretariats--in short, to the extent they are a really functioning part of a larger system--we believe that supervisory centers provide an important tool for qualitative change in the school system of the Northeast. Probably the most effective system is in Alagoas, where the supervisor/teacher ratio is low (about 1:30) and the supervisors work a full day. Too often, however, there is insufficient commitment to a supervisory system and too little will to use it as a major management tool. Further, the logistics of the system become more difficult when it is applied to

less densely populated areas.

In our judgment the system requires more probing examination before it would be desirable to commit to it the very large resources necessary to make it a fully effective instrument. Such an examination should consider the following points, for which adequate answers are currently lacking:

1. What should be the relationship of supervisory systems to any present or potential forms of school system regionalization?
2. Might it be desirable to consider giving regional chief supervisors line authority over school directors and independent teachers in small (1-3 teacher) schools?
3. What should be the relationship of the supervisory system to the municipal schools, in which the greatest number of lay teachers in need of help is concentrated?
4. Should supervision be continued on the basis of substantial regional centers or could it be better decentralized on a municipal basis to reduce transportation time? (This would not preclude regional Supervisors-in-charge.)
5. What should be the relationship to State Supervisory systems of the PAMP-supported supervisory system?
6. How can effective supervision be provided for schools in remote areas?
7. Should the precedent of some municipalities in holding monthly meetings of teachers be considered as a means of enabling supervisory staff to get some of their message across more economically?

8. To what extent can upgrading school principals substitute for some of the supervisory role and strengthen the remainder?

9. Should MEC and USAID provide financial support for the extension of supervisory training and supervisory systems in states in which supervisors are employed on less than a full work week basis or lack the transport to visit their schools?

10. What role should the supervisory system play in personnel matters such as the placement of teachers and their approval for permanent appointments after probationary periods?

11. What should be the relationship between the supervisors and normal schools?

12. Should the training of supervisors be organized as a university-level course with the prestige attached thereto?

## VII. INSTRUCTIONAL SYSTEM

### A. A Pattern of Change

It is hazardous to make any generalizations today about the instructional system of Northeastern primary schools. New curricula and teaching methods are being introduced - with considerable variance from State to State. Most schools, however, are still untouched or only slightly affected by the innovations adopted by the State Secretariats. The extent to which these innovations are being followed is a matter of considerable variance of opinion. So also is the question as to the extent to which they are responsive to the problems of improving quality of instruction and levels of student achievement.

Much of the change can be directly attributed to the SUDENE/AID program in several ways. First, the program trained most of the people who are promulgating the new approaches; many of these were trained in the United States, from which they brought back new ideas. Second, staff of USAID/NEHRO have been constantly encouraging change. Third, in some instances USAID/NEHRO has provided Brazilian technicians for up to a year to occasional states to work on curricula and related matters. There have, however, also been other influences at work. Much of what is being done in the Northeast follows lines of often controversial experimentation initiated in the south of Brazil, which in turn has been influenced by many sources.

## B. Description of New Approaches

New approaches are being generated largely through and in association with new curricula developed or being developed by the States. They go, however, considerably beyond curriculum development in the narrow sense. Further, to a large extent they are motivated by attempt to come to grips with that bug-a-boo of Brazilian education - "dropout-repetition" and consequent slow flow-through and output in the primary schools.

The principal new approaches we have noted are the following:

1. New more elaborate and detailed curricula
2. Pre-first grade preparatory courses
3. School preparatory courses in the first half of the first grade
4. Grouping of children by age-group
5. Automatic or semi-automatic promotion (accompanied by efforts to group children by ability)
6. Recuperative classes for failed students
7. Change in the rural school year
8. Greater utilization of textbooks
9. Greater emphasis on teacher work plans
10. New approaches to discipline
11. More sophisticated enrollment planning

Each merits some comment:

1. New curricula. All of the states of the Northeast have developed new primary curricula. However, of the States visited only Pernambuco, Alagoas, and Paraiba had new curricula printed and in effect by the 1970 school year. Piaui and Maranhão will introduce their new curricula in 1971, but it is problematic whether Bahia's will be printed in time.

The new curricula are basically better than the old and in many states are the first curricula ever prepared. We have made some analysis of them to the extent time and resources permitted, which appears in Appendix II. Important points can be summarized here.

All of the new curricula represent a form of marriage of South Brazilian, Western European and American, and local ideas but in substantially different combination from state to state. The drawing on outside experience, though entirely legitimate and necessary, has not been done with significant adaptation in terms of relevance to the Northeast child. All of the new curricula provide fuller guidance than ever before to the teacher on how to teach and provide a greater wealth of practical materials for teaching. All of them reflect the same general level of difficulty common in Brazilian primary curricula. Most Northeast Brazilian educators believe they cover more ground than is possible to teach on the basis of 3 to 4 hour schooldays. Curriculum planners have perhaps been more hopeful than school administrators that teaching hours might be extended.

The Pernambuco curriculum is particularly complex because it was originally conceived as a six-year course. Later, however, when it was decided to limit the primary course to four years, the curriculum was promulgated as a six-level course, with each student to be taught in four years as many levels as he is able to master.

2. Pre-first grade preparatory courses. Some states are trying to solve the problem of the first grade promotion requirements

of "knowing how to read" by a preparatory pre-first grade course. Paraiba has 29,000 students in a preliminary course in its State schools compared with 23,000 in the first grade (establishing incidentally a new form of pre-first grade drop-out for those who like to ponder over the conceptual statistical difficulties of the dropout-repetition problem.) The Ceara curriculum has pre-school training and stipulates in its curriculum that children should start first grade only when they know how to read.

3. Preliminary courses in first grade. In several states the first half of the school year is essentially a readiness or head-start program. The child receives no books during this period, but will be taught the alphabet and perhaps some 40 words. As one teacher put it, she saw no reason to give a child a book until he knows how to read.

4. Grouping of students by age-group. Most states appear to be making some efforts to separate children who are in the general age-bracket of their class from the over-aged. This is, of course easier to do in large schools than in small ones - which constitute the bulk of the system. Automatic promotion described below is sometimes a device. In one of the schools we visited, which was substantially underutilized, we were told that over-age children were not accepted at all. We also noted that curricula make no provision for different age-interest material for the over-aged.

5. Automatic or semi-automatic promotion. Some states (e.g., Pernambuco) are introducing the principle of automatic or semi-automatic promotion so that, for example, first grade students

go to the second grade whether they have passing grades or not. However, in the second grade they appear to study the first grade material all over again and are segregated in special recuperation classes. When grouping by ability is also combined with grouping by age the result can become quite complex in the organization of classes. In larger schools the attempt is possible at least at first and second grade level. In smaller schools - which are overwhelmingly predominant in the Northeast - the potentialities would appear extremely limited.

6. Recuperative classes for failed students. The State system of Alagoas and some schools in other states are offering recuperative courses to failed students during vacation period to enable them to keep pace with their class-mates.

7. Change in the rural school year. In agreement with mayors a decision has been reached in Maranhao to change the rural school year so that it does not conflict with the farming season. Other States are planning to adopt this practice also. This appears to be a straightforward way of coping with one cause of dropout and absenteeism. However, there may be some counter-vailing problems as the change may not be convenient for all teachers and students affected.

8. Greater utilization of textbooks. Considerable progress has been made in many State and better municipal schools in the use of textbooks. Indeed, some of the municipals are ahead of the State. The SUDENE/AID program has made a small but effective input in supplying textbooks as has also the national AID-supported COLTED program. However, in the aggregate their inputs are minor

compared with what the States, municipalities and individual schools are doing themselves. We found in most schools in the area children now have some textbooks - sometimes a full set but often only one or two (reader and arithmetic). In schools where children are expected to buy their own books there are locally administered "school book" programs which provide funds to buy books (and writing materials) for those who cannot afford them; this system works more adequately in some schools than others. Some schools have cooperative bookstores. In many schools adequate supplies of books are lacking owing to problems of distribution. In Piaui, for example, teachers complain that bookstores are afraid to stock textbooks, that schools can never get the kinds and quantity of books they need, and that supplies do not arrive in time.

It is still frequent, even where students are supposed to have books, to observe teachers lecturing without evidence of books of any kind, or with only a small fraction of students with books. There is considerable variance among teachers as to how highly they regard books, and apparently many do not read very much themselves.

COLTED has also made a contribution by providing large sets of books to most of the large primary schools (state and municipal) in the Northeast, and its collections are almost everywhere in evidence. These sets are intended primarily as source books for teachers. Their degree of use is irregular. Some schools have organized them into well-run libraries and even provide tables where children may use them. At the other extreme there is little

evidence of utilization by either children or teachers. For many teaching staffs the number of titles is bewildering; many are pitched at too high a level and have doubtful interest, and it is hard to separate the wheat from the chaff. None of the supervisory centers in the area have received COLTED sets; and we found few supervisors who knew the titles of any (though they do know titles of books supplied under the SUDENE/AID program, which were apparently more pinpointed to needs); and repeated efforts to determine whether they encouraged or assisted teachers under their supervision to use this resource bore no fruit.

Training programs for lay teachers that we observed teach them how to teach without books. There appears to be a divergence of opinion as to whether they would teach better if textbooks were used.

9. Greater emphasis on work plans. Supervisors generally place stress on persuading and helping teachers to organize their work and to make plans for classroom instruction. This is frequently conjoined with teaching how to use new curricula. However, supervisors find it hard to get teachers to make plans. Lay teachers are reportedly generally much more willing than certified teachers to do the work and accept advice.

10. New approaches to discipline. In at least some schools and through the supervisory system it is increasingly recognized that discipline problems are largely the fault of the inadequacy of the teacher, and attention is being given to helping teachers to deal with discipline more effectively. Expulsion is apparently less sternly applied.

11. New approaches to school enrollment. In some states and schools improved procedures are in effect that enable better planning of classes for the ensuing school year. This involves particularly pre-registration. This is sometimes accompanied by efforts to encourage parents to send their children to school. However, such efforts are generally weak and there is no attempt anywhere to enforce laws for compulsory school attendance, even in areas where schools have substantial unused capacity. Censuses of school-age population, therefore, do not convey a true picture of demand.

C. Impact of New Approaches

A precise evaluation of these new approaches is currently an impossibility. They vary widely from state to state and within states. Most of them are new in most of the schools to which they are applied - with most of the change having occurred in the past two years or projected for 1971 and 1972. No evaluation studies of any of them have been made in any state or at least they have eluded our diligent search. One approach to see how effective they have been thus far in an aggregate sense is to study the school "dropout-repetition" rate, which we undertake in the next section with uncertain results.

One thing that is certain is that, generally speaking, change is slow. For example, the new curricula are coming into effect very slowly for many reasons, of which the following are especially significant:

1. Many new curricula have not had wide distribution either because they are not yet in printed form, have been printed in limited quantities, or it has been decided to limit initial distribution.

2. The curricula are being applied first in the State schools. There are varying intents to pass them on to the municipal systems as well but this has largely not yet happened.
3. The new curricula are rarely - if ever - used in normal school training. In one case we were told an effort was made to orient normal schools but was unsuccessful.
4. Curricula are frequently not brought up in teacher training courses.
5. Generally a great deal of reliance is placed on the supervisory centers to get the new curricula established - but these centers as indicated earlier in this report have a limited outreach.
6. Because of newness, difficulty for the child and greater work for the teacher, degree of actual use as compared with nominal acceptance is believed to be considerable. Teachers with whom we talked made no criticism of new curricula; neither did we see one with one or with much to say about it.

With respect to most of the other elements discussed, a similar set of observations would be possible.

#### D. Concluding Comment

The implicit theory of the SUDENE/AID program appears to have been that by training and inspiring people they would produce results to bring about radical qualitative change in the instructional system. Certainly this has borne fruit in an abundant willingness to try new approaches and much effort to develop them. We have no doubt that this is producing some constructive effects, but they defy measurement on the basis of available data and the techniques possible in a short evaluation covering all aspects of the program.

In our view, it is unfortunate that the effort has been dispersed so widely among 10 states, each more or less independently following frequently parallel, often divergent approaches,

to reach the same goal. Eight years have now run on this approach, and there is no agreement whether quality of the instructional system is significantly better in any State, what the key reasons therefore are, which states may be following the best roads, or whether any have gotten to the heart of the matter. Action is motivated and justified by hunch and theory rather than demonstrated practicality. If we had had more time, we should have liked to have investigated Alagoas more thoroughly because it appears to be using the most thorough and systematic approach.

A certain measure of diversification in solving the problem of achieving optimal instructional systems in the Northeastern States (or for that matter Brazil) is useful. However, we believe that it is also possible to conceive as an element of healthy diversification an effort to muster the fullest possible resources to solve the problems in at least some bell-wether states. What has been and continues to be required is some all-out effort to conduct a full program of research, system design and experimentation in at least one or two states, backed by heavy input of technical assistance. As Brazil now enters into the concept of "fundamental education", the need for some concentration of talent - Brazilian as well as foreign - to achieve a breakthrough is the more apparent.

#### VIII. SCHOOL DROPOUT AND REPETITION

Has the SUDENE/AID program produced any discernible effects in reducing school dropout-repetition in Northeast Brazil? Have these rates changed and, if so how much? If flow through the system is improving, does this mean children are achieving more and

progressing to higher levels of study or is the change purely a statistical phenomenon?

The evaluation team tried to find answers to these questions. The results are inconclusive. Based on all data available, not much seems to have changed up until 1968. Beginning then, however, there are signs that things began to change in some parts of the primary school systems. New methods just being introduced or about to be introduced may mean that in two or three years time a substantial aggregate change will occur. At the time of our evaluation there was not enough data beyond 1968 nor is the future sufficiently clear to make predictions.

In doing the best we could with this problem we made an analysis of global school attendance data for 1961-1968 and also looked for partial statistical evidence wherever we could find it for 1969 and 1970.

#### A. Global Test

To make a global test of change in flow-through in the Northeast primary schools, we concentrated on analysis in the change in flow-through from the first to second grade. This is where the really heavy dropout and repetition takes place. Whatever change occurs between the first and second grades will serve as an adequate indicator of change generally.

For this purpose we obtained data from the Brazilian Institute of Geography and Statistics (IBGE) on the maximum initial enrollment in both first and second grades for a number of years since 1961. By comparing the size of the 1961 first grade cohort to the 1962 second grade cohort, we can obtain an estimate of the

number who failed to advance from the first to the second year. This discontinuance occurs for a variety of reasons whose independent effects are impossible to assess with aggregate data. Basically what we were able to do was to estimate the percentage who discontinued school during the first grade after having been counted in the maximum enrollment plus those who discontinued school after the first year either because there was no second year or because they failed first grade and therefore could not enroll in second grade the following year. It is not possible, unfortunately, to separate those first graders who are not really dropouts but returned to repeat the first grade the second year.

The following table presents the calculated percentage of students who did not progress from first to second grade in the nine Northeastern states from 1961 to 1968. Three comparison states are also presented: Para, Mato Grosso, and Goias. These states were chosen because of their relatively large geographical size and generally poor economic conditions. In terms of income distribution, the three comparison states rank at about the average for the nine Northeastern states. It should be noted that these states received no U.S. assistance for education.

Analysis of these data suggests the following conclusions:

1. The rate of loss between the first and second year of the primary school is consistently of staggering proportions.
2. The rate of loss appears to remain, on the average, at a fairly constant level over the years examined, with no visible improvement coterminous with the SUDENE/AID Agreement.

TABLE 11  
PERCENT DROPOUT FROM FIRST TO SECOND GRADE  
IN NINE NORTHEASTERN STATES  
AND THREE COMPARISON STATES BY YEAR  
 (between 1961 and 1968)

State	1961 1962	1962 1963	1963 1964	1964 1965	1965 1966	1966 1967	1967 1968
Alagoas	77.4	77.0	76.9	78.6	76.7	75.0	75.0
Bahia	68.1	65.8	67.5	73.5	67.6	66.2	65.1
Ceara	80.5	74.7	78.7	82.0	82.9	76.7	74.9
Maranhao	64.4	63.4	65.2	71.1	74.1	67.7	69.2
Paraiba	74.3	72.7	77.0	77.6	73.9	75.1	72.5
Pernambuco	71.9	72.2	71.7	76.4	71.1	70.0	69.0
Piaui	72.9	71.9	77.3	81.1	77.6	78.4	75.9
RGN	64.8	64.1	66.1	71.1	70.5	70.3	67.2
Sergipe	81.3	79.8	79.5	81.8	79.2	78.5	76.8
Goias	69.7	66.2	64.1	66.9	63.0	62.9	69.2
Mato Grosso	65.9	85.0	70.0	69.8	63.9	69.9	57.1
Para	69.7	73.7	65.5	76.5	62.8	67.8	62.4

TABLE 12  
DISTRIBUTION BY GRADE  
OF PRIMARY SCHOOL CHILDREN  
IN NORTHEAST BRAZIL AND MATO GROSSO, GOIAS, AND PARA  
(1963 and 1968)

	<u>1st</u>	<u>2nd</u>	<u>3rd</u>	<u>4th</u>	<u>5th</u>	<u>6th</u>
Northeast Brazil						
1963	64%	16%	10%	6%	3%	-
1968	60	17	12	7	4	2
Mato Grosso, Goias, Para						
1963	62	18	11	7	1	-
1968	56	19	13	9	3	-

Source: Anuario Estatística do Brazil, 1969, 1966 IBGE

3. There is little observable difference in rate of progress between the Northeast states and the three non-participant comparison states, except that Mato Grosso has made the most dramatic progress of all.

If we compare the distribution of primary children by grade in 1963 with that for 1968, we similarly find only a slight improvement over the period. As shown in Table 12, the improvement in the Northeast States was actually less than in the three nearby test States which received no aid under the SUDENE/AID program.

#### B. The Alagoas Data

We were not satisfied to let the matter rest with the global test made above for two reasons. First, we suspect global statistical data. Some may be badly collected. More serious, where actual data are not available, statisticians will rely on projections, which will make the data less sensitive to changes. It would take extensive detailed analysis of components of the IBGE statistical data to reach conclusions as to reliability and sensitivity. Second, as we have reported in earlier chapters, most of the innovative change that has occurred in the Northeast schools has taken place in the past two or three years - and often has not penetrated very far in the school systems. Therefore, it is possible changes are taking place which are not discernible from aggregate data, particularly in a series that ends with 1968.

Accordingly, we looked wherever possible for more up-to-date information that might be indicative of some sort of change. The most dramatic information was found in the State of Alagoas.

Data on enrollment in the State schools of Alagoas for 1968 through 1970 are the following:

	<u>State Schools Only</u> <u>Initial Enrollment</u>		
	<u>1968</u>	<u>1969</u>	<u>1970</u>
First grade	33,365	25,641	28,512
Second grade	13,524	20,328	19,219
Third grade	9,706	11,704	17,579
Fourth grade	6,678	7,827	10,023

These figures indicate a remarkable improvement in distribution by grade from 1968 to date. By comparison of first grade entrants in 1969, with second grade entrants in 1970, we can see that the decline is only 25% for the State schools compared with a rate of 40% from 1968 to 1969 for state schools and 75% for all schools between 1967 and 1968 (as shown on Table above). Comparison of these data, however, must be done cautiously for two reasons:

1. There is a steady influx into higher grades of the State schools of students from the municipal and private schools. Particularly as the State of Alagoas has been building a considerable number of new schools, the rate of lateral entry may be substantial. Further, other information indicates that more students are entering the second grade of Alagoas State schools than pass the first grade. For example, there were 18,949 who passed the first grade in 1969, while 19,219 entered second. We can't solve this problem simply by subtracting the difference and saying that this represents the influx of students from non-state schools. The influx could have been much larger as many of those passing the first grade in the state school may be "between year" dropouts.

2. Generally speaking, State schools are of higher quality than municipal and offer full four-year primary courses. Thus it is not possible to generalize from a State system flow-through rate (even if it could be adjusted for inter-system transfers) to a State-wide rate covering all schools.

Nonetheless, these figures are the most encouraging we have seen, and suggest that Alagoas is developing a system combined of many elements to solve the dropout-repetition-flow-through problem. Factors supporting this conclusion are the following:

1. Alagoas states that it has been working on semi-progressive promotion policies and will begin to apply them fully in 1971. Meanwhile in 1969 it passed 84% of students who presented themselves for examination compared with 50% five years ago. (The full significance of this depends on the proportion of students who present themselves for examination, which can change from year to year, depending in part on the extent to which the teacher discourages poorly prepared students.) Further, yearly grades are now based not only on end-of-year examinations but also month-by-month gradings.
2. Alagoas is instituting "recuperative" vacation classes for students who do not pass.
3. Alagoas has the best new curriculum we have seen and claims it has had "enormous effect"; it is already being revised to include new innovations.
4. Alagoas claims all schools use textbooks.
5. Alagoas has the lowest teacher/supervisory ratio in the Northeast. It claims to have the best supervision system in Brazil, with some supervisors working 7 hours a day five days a week in a single school.
6. Alagoas claims to have given refresher courses to all teachers in the state system.
7. The State Secretariat of Alagoas made a favorable impression on us as the best organized and managed among the states visited.

Alagoas was one of the States on our schedule for a brief rather than extended visit. In consequence we were unable to make

a more thorough study of what appears to us to be an unusually well-planned and systematic approach. Alagoas is also unusual in that it claims to be planning to make evaluations of the results of actions taken. It warrants more thorough study in conjunction with future programming.

### C. Other States

We have also examined a variety of recent statistics in other states on portions of school systems, individual schools visited, etc. A few such as some data on Rio Grande do Norte indicates some favorable trends but not to the extent of Alagoas. Most of the rest indicate no trend at all and continue to suggest that the fallout between first and second grades - and in succeeding grades - remains as high as ever.

Like Alagoas, the State of Pernambuco is moving toward a policy of automatic promotion. Since this is a very populous State, this could result in a big swing in regional statistics toward a more favorable flow-through rate. We noted, however, that many of the first graders automatically promoted to second grade were in special classes still studying at first grade level. In some other states we found recuperation or slow-learner classes. This suggests that future changes in statistics will require extensive analysis to determine to what extent change is real in terms of level of study as well as student achievement.

## APPENDIX I

### OBSERVATIONS ON TEACHER TRAINING CENTER AT NAZARE DE MATA PERNAMBUCO

Note: The following observations are drawn from notes made by various members of the evaluation team.

The training center at Nazare de Mata does considerable training of lay teachers. To date it has trained 280--96 for an eight-month period, 24 for a 6-month period and 160 for a three-month period. Lay teachers are brought to the center during the school year, which requires the additional expenditure of funds by their municipalities for substitutes. There seems to be considerable resistance on the part of teachers to attendance in vacation time. Teachers come from 73 municipalities where there are four Supervisory Centers. The Nazare de Mata Teacher Training Center provides housing and food and takes care of the teacher's "complete" education. The building (built with SUDENE/AID funds) has apartments for boarding 80 teachers and has room for some extra 40 on a day-time basis. Since the policy is to start with the least prepared individuals, many of the 280 lay teachers trained up to now had had only a second or third grade level of education. It is said that some of them had never used a toothbrush and some did not know what a toilet was for. After the first three months, the results in terms of personal improvement are dramatic.

There is no pass or fail upon terminating the course, but there is an evaluation of progress. The teachers do not receive

a pay increase on returning to their respective schools upon completing the course.

It is presumed that teaching lay teachers tends to change teaching habits. Some of the staff of the Training Center felt that there was not enough time given to content and methods to compensate for limited fourth grade education. But all agreed that at least some accomplishments were being made with most of the teachers. Some estimated, however, that about 30% of the lay teachers who attended were beyond hope.

Observers of the Nazare de Mata Training Center are varied in their judgements. Some are highly critical and consider that the training of teachers of less than four years education is a complete waste of time and money--that there are preferable solutions. This includes some of the leading educational authorities in the State. Others believe that it is responsive to needs and making progress.

Since it is not uncommon for lay teachers to be little above the level of their students, stress is first placed on content in the subject matter areas. They are then taught teaching methods. Up to the present, the upgrading of first grade instruction has been the primary consideration.

Teachers are taught to teach without textbooks. This runs counter to thinking of some Northeast educators who argue that it is hard enough for a university graduate to teach without a textbook, let alone someone with a fourth grade education. The teachers use copybooks to write down material that they will subsequently use in classroom teaching. Some of the material

Prepared in this manner that was shown to us appeared surprisingly good.

We further made an extensive analysis of a sample of materials used to teach the lay teachers. These materials were prepared by the Center staff, mimeographed and distributed to the lay teachers. They constitute what is called in Brazil "apostilas", papers or articles about the fundamental ideas in a course to be used as a text.

The collection included:

8 articles on Language Arts

8 articles on Social Studies

4 articles on Educational Psychology

4 articles on Evaluation (tests and measurements)

4 articles on Class Management

4 articles on Arithmetic (including one on programmed instruction)

2 long papers (75 pp) on Portuguese Grammar

4 papers on study skills

1 paper on panel discussions

1 paper on how to write official letters

1 paper on the new Brazilian currency

It is difficult to know if these materials are at an experimental stage or if they already represent the results of successful use. Their quality as well as their general format is irregular, suggesting that they are not yet in definite form. Some more specific comments:

1. From a formal point of view, there is no index of

materials, nor a statement of their objectives and level - whether for teachers, for children or for graduate teachers' courses.

2. There are many typographical errors that confuse the reader.

3. Some selections are seemingly irrelevant to lay teachers such as one translation from a book entitled, How to Study, written for American college students with reference to peculiar American situations.

4. There is no apparent effort of relating some of the theoretical papers, in Educational Psychology for example, to those with practical suggestions.

5. As far as level is concerned, some of the articles reveal a lack of imagination and of knowledge both of the language and of the subject. Others are sophisticated, copied from college level books, out of the lay teachers' reach. Such an example is an article on programmed instruction in mathematics which uses a highly specific vocabulary both in mathematics and in psychology without explanation.

6. In psychology, two papers were copied from a text; two others on child development were poorly summarized with misplaced emphasis.

7. Three papers on Class Management are practical and simple; a fourth, on "Discipline" is a set of abstract, philosophical and poetic notions on self-discipline of little use to a first or second grade class.

8. The four papers on evaluation are good but at too high level and give no examples.

9. Most of the Social Studies materials are better

written and more evenly selected even though they show a very traditional approach to history and geography. Two, on the family and on the community (of Nazare' de Mata) are naive and of very poor quality. No idea is given about the study of the region, nor suggestions on how to discover the features unique and peculiar to the childrens' experiences in their environment.

10. Probably the most inadequate of all materials are those in Language Arts; three of them on Oral Communication, Listening and on the Preparatory Period are poor summaries of possibly good sources. Basic concepts such as "language" itself or "motivation" are unclear and sometimes erroneous.

11. Some lists of suggestions of activities are good but irrelevant to schools in the interior such as visits to zoos and cathedrals which do not exist in the area; some materials such as records, record players, slides and slide projectors are also suggested.

12. One of the papers on Dramatization (about historical facts and personages) is superficial, without focus and containing questionable statements about the "hardships" of a life of public responsibility.

Analysis of these materials lead to the conclusion that some of the staff who prepared them, especially those in Language Arts, are not very well prepared themselves; they cannot make a good and simple selection of materials for the lay teacher to take home, and cannot make an adequate summary of a chapter of a normal school text.

Also, it seems clear that the staff in Nazare' de Mata

did not receive any technical assistance in preparing materials or planning their curriculum.

## APPENDIX II: COMMENTS ON DEVELOPMENT OF NEW CURRICULA IN THE NORTHEAST

Curriculum development is an area in which USAID's positive impact, directly through technical assistance, and indirectly through the specialization of technicians from the various states is widely recognized. The change between what existed before and what exists now is quite evident both from a quantitative and qualitative point of view. Furthermore, in order to produce the specific change in curriculum the Secretariat's organization and some of its purposes had to be redefined, new ways of thinking were started, techniques of group work became known, new types of personnel were prepared and hired.

### A. Some Quantitative Aspects.

1. The "Programs" which existed in the NE prior to 1962 were small booklets (5" x 6") with a number of pages varying from 31 (Pernambuco) to 130 (Bahia). The Objectives and Content are briefly set forth. For instance, the first grade language arts curriculum occupies one (Pernambuco) or one and a half page (Bahia).

The available samples of today's curricula vary in their format and explicitness but the smaller (Ceara) has 95 pages of 8" x 11" size and the largest (Alagoas) has 300 pages (8½" x 12").

The size and format of the curriculum guides are significant, in relation to the quantity of suggestions and exercises recommended. The change to a larger format also implies a

different way of thinking about (1) the teacher and her education, and (2) the child and his/her way of learning. While a resourceful teacher with a good professional background may not need to be guided step by step, a poorly prepared teacher does need such a guide. From the child's point of view he should learn better with great numbers of concrete and varied experiences (which are illustrated in the new Curricula) than with a few mental exercises.

B. Number of Persons and Research Involved.

A new attitude toward group work and new skills such as bibliographical research developed in some of the states as a consequence of their working on the new curriculum. In Pernambuco, for instance, hundreds of persons participated in the project; teachers, the staff of the Núcleos de Supervisão and of the CAMPS were consulted by the Department of Elementary Education, and the work was coordinated by 5 specialists. The previous 1960 Programa had been prepared at the Instituto de Pesquisas Pedagógicas that had a small staff. No bibliography or other sources of information were mentioned. The present curriculum has a long bibliography.

Other curricula were less thoroughly prepared. That of Piauí was rendered in about 15 days, though based in large part on work done by a USAID-supplied technician several years earlier.<sup>1/</sup> Bahia has been working on its curriculum for three years but progress has been stalled for lack of adequate typist support.

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<sup>1/</sup> The Piauí curriculum was not available until after this was written. It is less elaborate than the others and presents the same types of problems

The need for constant supervision is recommended by the Alagoas State Council of Education in the act of approval of the new curriculum (Alagoas' Programas, p. 2) The implication is that the state teachers will not know how to use the new Programas without constant supervision. In view of a low (3 to 1) ratio of teachers to full time supervisors, Alagoas is probably making its new curriculum work. In most states, however, technicians (in the Secretariats) and Supervisors work part time and in many cases take extra jobs to supplement their salary. Supervisors, especially, have problems with transportation.

C. Some Qualitative Aspects of Curricula.

The older Programas were lists of "general" and "specific" objectives for each grade and subject plus a list of topics to be taught; some related activities were suggested. The new curricula sub-divide each subject and list the specific abilities to be developed in each area; they also list a variety of activities that are apt to stimulate these abilities. (In the Bahia curriculum there is an unsuccessful attempt to list observable "behavioral objectives"; actually a list of "mental" objectives is given such as "the acquisition of the idea of addition.")

Some practical consequences follow from the new curricula. The previous Programas were prepared with the "ideal" assumption that teachers had had a first quality general and professional education. Consequently, children were exposed to a very

irregular quantity and quality of materials.

With some of the new curricula (not all of them) even those teachers who do not have much more than an elementary education can "know" what to do in a classroom. Consequently children have a much higher chance to be systematically exposed to a great number of ideas and exercises.

1. The Approach to Reading. Reading is the greatest first grade Brazilian problem, the area in which the majority of children fail. In general it is said that the curricula are too difficult but this may not be the only trouble. A comparative study of Brazilian, North American, and European curricula, made by INEP (III Conferencia Nacional de Educacao - Vol. I - pp. 295-321) shows that Brazilian schools demand of first grade children the ability to read silently the long lists of questions given in final exams, understand and answer them. The evaluation of reading - for passing purposes - is in many countries made at the end of the second grade.

In the five curricula examined, instructions and exercises about the first steps of the reading process are treated in a very irregular way. Alagoas does the best job; there are precise and specific explanations about the steps to be followed (130 pages about language); practical exercises are suggested for visualizing, syllabifying and composing words and completing phrases; there are examples of cross-word puzzles, and a long bibliography.

Pernambuco Guidelines are not clear. There is a "preparatory period" of a kindergarten type and children are supposed

to learn to read at the second level. In Linguagen Nivel 2 (pp. 15, 16 and 17) all the instructions on how to teach reading are given. On page 18, children are already expected to "read silently" three small, related sentences. These guidelines do not help a teacher who does not know how to teach.

Bahia's Guidelines are not very helpful either. As far as instructions are concerned in less than 10 lines five steps are listed to "develop the ability to perceive and understand words;" the next recommendation is about silent reading (Linguagen, p. 3 período Inicial).

Ceara has a period of "alfabetização" before first grade and a recommendation in bold type (O Livro da Professora, p. 25) "Children should start first grade only when they know how to read." In two pages - 24 and 25 - the global process of teaching reading is explained; the sequence is extremely concise but correct according to the method - and it is certainly more than in Bahia and Pernambuco. There are remarks in parentheses suggesting that those who prepared the curriculum know that teachers are not fully prepared to teach (Ex: "Each word takes more than one lesson to be learned, sometimes two or three.") By the end of the first grade children are expected to write words with difficult combinations of letters (lh, nh) in masculine and feminine forms, singular and plural, to use such punctuation as the period, comma, question mark and exclamation point, and to accentuate the words (Ibid. p. 25).

The Paraíba sample analyzed is for 2nd grade level and

children are already expected to know how to read.

#### D. Difficulty of Curriculum

Janise Pinto Peres ("Os Programas da Escola Primaria de Pernambuco.." *Cadernos Região e Educação*, 9 (18) Dec. 1969) compares the Pernambuco curriculum with those from six other Brazilian states (only Ceara from the N.E.) two from Switzerland, one from Italy, one from France. They all have the same requirement about the "acquisition and understanding of the reading mechanism" in the first grade. These countries, however, have a daily schedule of 5 or 6 hours - Brazil has a 3 to 4 hour schedule. In grammar the Brazilian programs are more "pretentious" and Pernambuco demands still more in items such as adjectives, verbs, direct and indirect modifiers and separation of clauses in a sentence.

The Ceará curriculum does not recommend a systematic study of grammar. On page 38 it is written in bold type: "One only learns to write correctly by much reading. Correct language is acquired through the absorption of good reading and not through the rules of grammar." There are many recommendations, at all levels, to expose children to books, to get second hand books, to have books in the classroom.

The Pernambuco curriculum, in addition, has one built-in difficulty. The initial plan had been for six years of elementary education (4 "fundamental" and 2 "complementary") according to the recommendations of the Lei de Diretrizes e Bases, but it was transformed into a four-year program of six steps. This is

exemplified by the Social Science content in the various NE curricula. All of them follow the same pattern:

First grade - Family and School  
2nd grade - Local community and country  
3rd grade - State and NE Region  
4th grade - Brazil

In addition to these four Pernambuco has:

5th level - Brazil and the Americas  
6th level - Brazil and the World

The plan is for each child to progress at his own pace -- thus some children will complete all six levels in four years while others will complete less.

The Mathematics program of all the samples examined include addition and subtraction in the first grade, plus a more or less difficult introduction to multiplication and division, to the metrical measurement system, and to the monetary system. Some of these demands are made only in the fifth grade in other countries. (This fact is not easy to understand since many American curricula were consulted and actually used as models). According to the previously mentioned article some of the demands of the third grade Pernambuco mathematics program (multiplication of fractions, for instance) are taught in the sixth grade in the USA and in Switzerland.

The new Maranhao curriculum was not published at the time of our visit but is understood to involve the traditional level of difficulty.

### E. Relevancy of Curriculum

The general organization of the five NE curricula follows what has become a tradition in the Western world; they are comparable to and sometimes more difficult than programs developed in Europe and in the USA; adaptations were necessary especially in relation to Social Studies. Our general view is that not enough emphasis is placed on situations familiar to children in Northeastern Brazil and that no instructions are given the teachers to use such materials.

More emphasis could also have been placed on items of practical importance for the Northeast child. The Ceara curriculum - which is based on a different model - is the only one that emphasizes (and this even in the first grade) that children can do things appropriate to their age level, to earn some money such as carrying water, selling newspapers (p. 51). As part of Natural Sciences they can plant a garden and sell the product (p. 74), learn to repair tools and instruments, change a fuse, mend clothes, cook, etc. The abilities of the parents are valued and the recommendation is made to invite the parents to come to school and teach the children whatever they know how to do.

The curricula could be more rurally oriented in the rural areas.

A curriculum could be developed about the necessary daily amount and quality of food intake, with practical activities (from the planting, and raising of small animals to the cooking and preservation of food) used as motivational devices for reading, arithmetic problems, art, hygiene, science and literature.

Most of the rural schools visited have enough space for a garden but none was seen.

Some attention to practical things - relevant to the area - could be as important for the Northeastern primary child, particularly those who will not go on to Ginasio, as learning to read and write and knowing "the different positions of the Southern Cross" as recommended in most of the examined curricula.

Many of the suggestions in Natural Sciences presuppose the existence of instruments and materials either not common in Brazilian schools, or too expensive, or not easily available in the Northeast market such as house thermometers, magnets, magnifying glasses, cameras, binoculars, aquariums, materials to build small telescopes, etc. The adaptation of foreign models of curricula was not always done with realism.

On the other hand a practical problem in the area such as conservation of the soil is given some verbal attention from first grade (in Pernambuco though not in Alagoas, Ceará or Paraíba). Recommendations are to talk with the children about erosion and collect pictures of soil conservation techniques. However, erosion is eating away the ground around the school buildings and nothing about it has been done (ex. Comaragibe, Nazare da Mata).

## APPENDIX III

### Goal Setting for a Purely State System Program

If the program is concerned only with bringing about improvement of the State school systems (and certain municipalities allowed to participate), then goals should be established that are solely relevant to such systems. This requires different goal-setting and measuring approaches since we must isolate changes in the State system from the larger picture that surrounds it.

#### 1. Enrollment

A quantitative goal can be set as to the increases in enrollment to take place by levels within the state system. This can be amplified to include particularly specific goals for enrollment in schools built under the program. (To the extent municipalities participate in the agreement on a special basis, separate quantitative goals can be set for them).

#### 2. Promotion, Retention, and Achievement Rates

A goal should be set as to the promotion and retention rates of the State schools and the achievement levels of their students.

Comment: The pyramid suggested for the global approach would have limited meaning in this more limited context. Lateral entrants from the municipal into the state schools at 2nd, 3rd, and 4th grade levels already substantially affects the pyramid so that purely state system achievement is distorted. 1/ Lateral entrance into new state ginasios will probably be even higher in the rush to get into newer

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1/ In some state primary schools there are many more third grade than second grade students.

schools and the States' desire to fill them.

The goals therefore could better be established in terms of: (a) percentage of enrollment in each grade (less persons transferred to other schools or localities) who are promoted; (b) percentage of those promoted (except 4th and 8th grades) who return the following year.

Flow-through between primary and ginasio would be hard to establish on a purely state system basis as there will be a great deal of transfer of students at the end of primary systems as between the state, municipal, and private systems in the selection of ginasios.