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AID 1020-25 (10-70)

REPORT U-446

PROJECT APPRAISAL REPORT (PAR)

17p.

PAGE 1

1. PROJECT NO. 518-11-690-075.1	2. PAR FOR PERIOD: 3/1/72 TO 5/31/74	3. COUNTRY Ecuador	4. PAR SERIAL NO. 74-6
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5. PROJECT TITLE

EDUCATION DEVELOPMENT Primary Education

6. PROJECT DURATION: Began FY 67 Ends FY 74	7. DATE LATEST PROP 11/15/71	8. DATE LATEST PIP None	9. DATE PRIOR PAR 3/15/72
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10. U.S. FUNDING	a. Cumulative Obligation Thru Prior FY: \$ 1,851,000	b. Current FY Estimated Budget: \$ 543,200	c. Estimated Budget to completion After Current FY: \$ -0-
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11. KEY ACTION AGENTS (Contractor, Participating Agency or Voluntary Agency)

a. NAME University of New Mexico	b. CONTRACT, PASA OR VOL. AG. NO. AID/1a 401
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I. NEW ACTIONS PROPOSED AND REQUESTED AS A RESULT OF THIS EVALUATION

A. ACTION (X)			B. LIST OF ACTIONS	C. PROPOSED ACTION COMPLETION DATE
USAID	AID/W	HOST		
			(Note: This special evaluation covers only one activity of the Primary Education Project, and focuses only on those elements of the activity that need attention or correction. More positive elements are not included. Even though this evaluation covers only the one activity, the findings have important implications for other related and supportive activities of the project. Readers should also note that another special evaluation of the project "Ecuador's First Grade Textbook and their Impact on Schools," was submitted to the ARC in June, 1973.)	
X			1. Analyze basic assumptions underlying present Primary Education efforts to assess appropriateness of, and ways to improve or modify, courses of action to increase impact of efforts on educational sector. (Note: completion of sector study should provide much needed data).	January, 1975
X		X	2. Evaluate textbook distribution system to determine effective coverage and identify bottlenecks.	October 1974
X		X	3. Reorganize present teacher re-training program to concentrate on training fewer teachers better.	November 1974
X		X	4. Conduct supervisor training program.	October, 1974
X		X	5. Explore possibility of concentrating efforts in a pilot area to determine effectiveness of various input mixes.	October 1974

6/21/74

D. REPLANNING REQUIRED						E. DATE OF MISSION REVIEW	
REVISED OR NEW:	<input type="checkbox"/> PROP	<input type="checkbox"/> PIP	<input type="checkbox"/> PRO AG	<input type="checkbox"/> PIO/T	<input type="checkbox"/> PIO/C	<input type="checkbox"/> PIO/P	June 27, 1974
PROJECT MANAGER: TYPED NAME, SIGNED INITIALS AND DATE				MISSION DIRECTOR: TYPED NAME SIGNED INITIALS AND DATE			
Charles Reed				Peter M. Cody			

## CONCLUSIONS AND RECOMMENDATIONS OF A SPECIAL EVALUATION OF THE USAID/

### ECUADOR PRIMARY EDUCATION PROJECT (518-11-690-075.1)

(The following is a substantive translation of the basic methodology and conclusions from pages 1 through 7 and 126 through 139 of the study. For a more complete investigation of the data and analysis of the evaluation the reader is encouraged to consult the "Informe Final, Evaluación del Programa de Reentrenamiento de Maestros Primarios," CEMA, April, 1974, which is on file in the AID Reference Center).

#### Summary of Recommendations and Conclusions

##### Purpose of the Study

CEMA, the Ecuadorean Centro de Motivación y Asesoría, conducted this evaluation during the period from June 18, 1973 through April 15, 1974. The purpose of the evaluation was to determine the effectiveness of the Primary Teacher Re-Training Program, in accordance with USAID Contract # 518-354.

The study was to accomplish the following specific goals:

1. Evaluate the results of the Re-Training Program with respect to (a) the use of new first-grade textbooks and guidelines that had been developed by the Ministry of Education and (b) the application of new educational techniques by trained teachers.
2. Provide feedback to those teachers included in the sample and to trainers in charge of the program.

##### Study Design

The Sample--The sample consisted of 76 public school teachers from urban and rural areas, randomly selected among those who had participated in Re-Training Seminars. Thirty-seven were from Manabí Province (Bahía, Jama and Charapotó) and 39 from the Province of Pichincha (Conocoto, San José de Minas, Tabacundo and five school districts in Quito).

Data Collection--Six evaluators were in charge of data collection. They made three visits to teachers in three different phases of the training program: after training, before follow-up and after follow-up.

Measurement Instruments Used--The following instruments were used to collect data for the study:

1. Ribble's Socio-Substantive Scale, which measures the socio-emotional environment of the classroom and teacher-student interaction, establishing measures of teaching and teacher styles.
2. Classroom Observation Record, which determines teacher behavior with respect to use of resources, materials and new educational techniques.
3. Questionnaire for Teachers to collect their opinions on training, follow-up, and several other factors which aided or hindered the use of textbooks and educational techniques.
4. Characteristics of the schools, teachers and students--a questionnaire to indicate various influences on the development of the program.

Statistical Design and Analysis-- The following statistical tests and procedures were applied to the data:

1. Distribution of pertinent frequencies and percentages with respect to the sample, of all items which were included in the questionnaires or instruments used.
2. Comparative Analysis of Means and Standard Deviations for each of the variables, establishing the number of cases and magnitude of change.
3. Analysis of changes in the various items, establishing the direction of such changes--positive or negative.
4. Cross-tabulations between variables which had greatly changed and school, teacher and student characteristics.
5. Analysis of variance among teachers whose teaching methods range from autocratic or directive, to democratic and non-directive.

### Conclusions

Conclusions have been based on the above statistical analyses. These will help attain a better general view of the Program situation with respect to its goals in both areas covered by this study.

1. Considering one of the objectives of the Program--to train teachers in the use of new textbooks and guidelines--it was found that the training and follow-up have had an impact only in a small number of schools in promoting purchase of first grade textbooks, in spite of the fact that this was one of the dependent variables which had achieved a greater change. At the end of the last measurement, in 20 schools the students had a few science textbooks, in 23 schools mathematic textbooks were being used, and in 31 schools reading books were being used. Furthermore, the use of textbooks and guidelines is actually decreasing over time. The following factors appear to have contributed to the lack of wide-spread textbook use.
  - a. A greater acquisition and purchase of textbooks was not attained because training did not provide sufficient orientation in the use of new textbooks and guidelines and did not emphasize practical (on-the-job) training. On other hand, many teachers did not purchase textbooks because they considered them an imposition, not an aid.
  - b. Due to teachers' fear of failure and because many considered these textbooks to be inferior.
  - c. Because some teachers think the reading textbook is useful only when children already know how to read; that it isn't useful to teach modern mathematics, or because science is not taught regularly in the first grade.
  - d. Because no textbooks were available in the market, or because some teachers were awaiting free distribution of same.
  - e. Because parents could not afford them.
  - f. Because a great number of supervisors did not guide or help teachers in these aspects and in some cases were opposed to the use of textbooks.

Another Program objective was to bring about the adoption of new teaching techniques in schools, specifically in the use of materials and other teaching resources and a new teaching style and behavior on the part of the teacher. The conclusion was that, from the teachers visited, a minimal percentage used didactic materials and other resources--such as group dynamics (7.9%), learning centers (10.5%), different motivations (19.7%), developing lesson plans with student participation (2.6%) and varied media materials--effectively.

The following observations are offered in support of this conclusion:

- a. Only one teacher of those who participated in the sample, was defined as democratic, using the examination methods in his classes. The majority were seen as ambivalent (46.5%), or ambivalent with tendency to lecture-recitation (16.3%), and were regarded as teachers who did not take adequate advantage of their class time, showed little concern for their students, or were catalogued as autocratic or directive teachers.
- b. Even though many of the teachers considered that the methodology utilized in the training was interesting and constituted a novelty, and that it was the best course in which they had participated, they did not find it practical for their own classes because the training did not give clear orientation to the use of materials and disregarded the different environments in which teachers work, especially in rural areas where no facilities for acquisition and preparation of materials exist.
- c. The training covered many technical and content areas but did not delve sufficiently into the processes needed to effect behavioral change, nor did it provide sufficient orientation in the use of resources and materials.
- d. Program objectives on these aspects were not fully complied with because many teachers did not appreciate the benefit of using materials and resources in their classrooms. They regarded them as a waste of time, or waited for the Ministry to provide all materials to them.
- e. Behavioral change was not attained because the need for status or authority is strongly rooted in teachers, as is their fear of criticism on the part of the parents and authorities. They found themselves limited by the traditional disciplinary system that maintains the authority image as much of teachers, as of directors and supervisors.

#### Recommendations

1. In order to obtain better results in the Re-Training Program, priority should be given to an in-depth study of the different needs and circumstances of each school; that is, geographical area, type of school and various training needs on the part of the teachers. With this study as a base, the Program could develop alternatives to satisfy these needs, resulting in a greater application of acquired skills in each of the schools.

2. If training is to bring about the use of new educational texts and techniques, it should take into consideration the fact that it requires a training method which is itself more democratic and gives an opportunity for more active teacher participation. The training design should therefore provide the skills and methodology needed to obtain this change.
3. Training on subjects such as feedback systems, group dynamics, class programming with student participation, teaching methods involving greater student participation, etc., should be provided, as they are fundamental in developing a democratic behavior. The training should also emphasize process for behavioral change through practical classes (on-the-job training) in the three subjects including the use of new teaching techniques. It should stimulate the teachers' ability to create an atmosphere of confidence, develop teacher creativity in the use of resources and means of stimulating creativity in children.
4. During the training and follow-up, a clear relationship between exercises used and their practical utility in the classroom should be demonstrated.
5. If training aims to bring about the use of educational materials and other resources, principally the use of new textbooks, it should give special attention to practical classes (on-the-job training) and reinforcement in the three subjects--especially in reading, where more difficulties are faced (the reinforcement provided in the follow-up of this subject resulted in greater positive change).
6. The usefulness of textbooks and various educational materials, the possibility of taking advantage of student collaboration in the preparation of those educational materials (which would imply lower cost and less time), and the use of environmental materials should be demonstrated through practical classes. This way teachers could better appreciate the ways of using them in their classrooms.
7. The program should provide a periodic reinforcement system for teachers, which would consist above all of meetings between teachers and supervisors, in order to carry out practical classes and to guide teachers in their work. Thus, the supervisory system would be of vital help to the training program.
8. In summary, program managers should think of the possibility of viewing the goals not only in terms of number of people trained but of the percentage of teachers who practice what has been taught.

9. They should also be concerned with the matter of maintaining better coordination with appropriate department of the Ministry, to a better distribution of texts and materials which are necessary for teaching purposes, but which were not found in some places.
10. A re-design of the training program--which would contemplate several alternatives leading to a greater change--should be considered, in the light of the fact that the desired goals require greater amount of time for training as well as for follow-up. The valuable experience acquired by trainers during the performance of their job, which would be of great help in the preparation of new work plans, should also be incorporated into the new training program.

#### Detailed Conclusions

##### Teacher Behavior

Little or no change has been made in teacher behavior by the re-training program. This lack of success in achieving the project's principal objective can best be analyzed in terms of the following obstacles to behavioral change.

1. Teachers' need for an "authority status" is one of the major obstacles to behavioral change, as is their fear of criticism for adopting different behavior in and out of the classroom, from their supervisors, colleagues and parents.
2. The need of authority status by teachers prevents close teacher-student relationships, resulting in a formal and rigid relationship.
3. The prevailing disciplinary system in visited school systems attempts to maintain the traditional authority image of teachers in their classrooms, and of directors and supervisors in their areas of responsibility. This is another major hindrance to a more flexible relationship between teachers and students.
4. The program has not been able to incorporate supervisors as support elements for changing teacher behavior. Teachers receive neither orientation nor feedback from the supervisors that would enable them to observe and analyze their own behavior in order to seek new change alternatives.
5. Training and follow-up do not provide teachers with the skills necessary for the adoption of new behavior.

### Teaching Resources and Materials

The following conclusions were reached with respect to the use of resources and materials in the classrooms.

1. Training objectives for use of materials and other teaching resources are not being fulfilled. No increase in their use was observed in the classrooms of the majority of teachers visited.
2. Of the teachers visited, only a small percentage used didactic materials and other teaching resources--such as group dynamics, (7.9%), learning centers (10.5%), different motivations (19.7%) and varied media materials, or developing lesson plans with student participation (2.6% at the end of third measurement)--in their classes.
3. Teachers did not appreciate the true benefits derived from the use of materials, and considered their preparation as a task that did not justify the time and energy.
4. Teachers in the sample did not accept the possibility of student participation as resources in material preparation or in the development of lesson plans.
5. Teachers expected the Ministry to provide necessary didactic material for their classes. This attitude reflected teacher dependence on the Ministry.

### Teaching Style

An area in which some change--both positive and negative--was achieved on the part of teachers, was in methods of instructing Science and Mathematics after training and the follow-up.

Teachers' methods of instruction changed positively after training (Science--44.7%, and Mathematics--36.8%), and negatively after follow-up (Science 38% and Mathematics 29%). In Reading, the largest percentage of teachers changed negatively after training (29%) and positively after follow-up (23.6%) Emphasis during the follow-up on practical Reading lessons produced a larger positive change than was attained in Mathematics and Science.

However, this was not significant enough to bring about a shift in style from the traditional to modern.

The teaching styles used by the majority of teachers participating in the sample were the ambivalent method (46.5%) and the ambivalent with tendency to Lecture-recitation (16.3%). Teachers using these methods of instruction are catalogued as autocratic or directive--not taking adequate advantage of time and showing little concern for their pupils.

The autocratic or directive behavior observed in a great number of teachers reflects the traditional educational system prevailing in the Ecuadorean environment and the teachers' personal and cultural values. Only one teacher, of those who participated in the sample in Pichincha and Manabí, was defined as democratic--using the examination methods in his classes.

#### Use of Textbooks and Guides

1. The largest number of teachers who increased the use of textbooks in their classrooms after training were found in urban areas of the Province of Pichincha.
2. The textbook that had more demand and was more frequently used was the Reading text. Nevertheless, after follow-up, also its utilization diminished.
3. In spite of the interest shown by various teachers in promoting textbook purchases for their schools, they could not make it a reality due to the lack of books to buy.
4. There were many teachers who resisted the use of textbooks and guides, either due to fear of failure in their task or because they considered them inferior to other texts.
5. Some school supervisors (46.1%) and the principals (34.2%) did not provide any orientation in the use of textbooks and guides, and in some cases opposed the use of the new textbooks.
6. Parents complained that they had to purchase too many textbooks and the cost of them was too high.
7. In some schools textbooks have been purchased, but because the teachers considered them an imposition on the part of the Ministry they were not used in classes.
8. Many teachers do not use the "Caritas Alegres" book because, among other reasons, they were convinced that this textbook is useful only when children already know how to read. Other teachers did not use "A Jugar con los Números" because they did not wish to teach Modern Mathematics. They said this subject was of no use to the students. Other teachers did not teach Science regularly in their classes.
9. Many teachers did not promote the purchase of textbooks in their schools because they expected the Ministry to distribute them free of charge.

### Support from the Organization

1. The Program is structured in such a way that it promotes the preparation of the greatest possible number of teachers, in the least possible time, without taking into consideration the quality of the training.
2. The seminar design tries to achieve objectives when textbooks are not even available for teachers to purchase and when little concern exists to provide them with other type of materials which are out of teachers' reach.
3. The supervisory system does not give any support to the teachers and in many cases constitutes an obstacle to teacher behavior change and use of new teaching techniques, nor does it provide a reinforcement to the application of new educational methodologies.
4. Twenty-five of the 76 teachers considered in the sample did not attend follow-up sessions because they were not invited. This gives an idea of the lack of coordination which exists in the Program. Also, of the 9,223 teachers who participated in training until August, 1973, only 2,262 had received follow-up as of December, 1973. (Source: "In-service Training Program, page 3).
5. The Re-training Program does not establish measurable objectives for teacher behavior change either at the end of training or later in the classroom.

### Training Effects

1. The majority of teachers said that the re-training seminar is the best course in which they have participated, because of the interaction opportunity it gives, the dynamic and participative methodology used in the training, and the collaborative spirit it develops not only among participants but between them and the trainers as well.
2. Even though many teachers considered the methodology used during the training to be new and interesting, they did not see a practical application, especially among first graders.
3. Many teachers stated that they have not been able to apply the methodologies used in the course--such as group dynamics, individual work with children, use of different motivations, etc.--because training did not provide sufficiently clear practical instruction and practice.

4. The training covered many technical and content areas but did not dwell enough on the process necessary to achieve behavioral change.
5. Preparation and use of materials during training did not take into account different types of environments in which teachers work, especially rural areas where no facilities exist for purchasing materials.
6. Some teachers thought that the training did not provide them with sufficient orientation in the use of textbooks.
7. The training course tried to accomplish too many objectives in too short a time.

#### Recommendations

As a result of data gathered for this study, and on the basis of the conclusions arrived at, this section contains the recommendations made by the evaluators and the teachers visited. These are grouped in two categories--one for the trainers and the other for project administrators.

#### Training and Follow-up

The training program should develop clear and measurable goals as to what the teachers should demonstrate at the end of training as well as the hoped for behavior in the classroom.

1. If training is to motivate a behavioral change on the part of teachers, it should take into consideration the main obstacles to such change detected by this study. These obstacles are: fear of criticism by supervisors and parents; fear of failure in teaching and fear of losing authority status in and out of the classroom; lack of cooperation and support on the part of parents and authorities; lack of material resources in the schools.
2. If training is to promote the adoption of new techniques and the use of textbooks and other teaching resources, teachers should be encouraged to create an atmosphere of confidence in the classroom, develop creativity in the use of resources, plan activities and develop creativity in children.
3. In order to build the fundamental skills necessary to achieve change in teacher behavior, priority should be given to such things as feedback systems (between teachers and students), teacher creativity, de-

velopment of lesson plans, participative teaching method; and also should emphasize development of the classes in the different subjects taught in the first grade.

4. If the purpose of the training is to change teaching styles, the fact that the majority of teachers of the sample were categorized as ambivalent--implying a disorganized atmosphere in the classroom and little concern on the part of teachers--should be given adequate attention so that the persons responsible for the Program redesign the training using different methods to motivate and give incentives to the teacher.
5. Instead of providing so much theory, training should deepen the progress of the teacher's behavioral change.
6. A basic aspect of training ought be giving teachers an opportunity to practice classes which are adequately planned in the group. This practice would enable trainers to perceive the degree of training imparted and to clarify and reinforce where needed.
7. A clear relationship between exercises used and their practical usefulness in the classroom should be established during training.
8. If the goal of the training and follow-up is the use of new textbooks and educational techniques, the seminar should take into consideration that this requires more democratic and participative methods of instruction on the part of the teachers and should therefore orient training design towards building skills and methodologies needed to attain this change.
9. For teachers to adopt new techniques and adequately develop the abilities for which training is provided, the above recommendations should be taken into account and as well training time should be extended to two weeks and follow-up to one week.
10. Every re-training seminar should end with an individual work plan for each teacher. These work plans should include use of learned techniques and abilities.
11. In order to instill a commitment to use textbooks and other materials, training should carry out practical demonstrations with simple, locally available materials. This way teachers would be able to more clearly learn how to use them and appreciate how they can be of great help in teaching.
12. Training should motivate teachers to prepare and use such materials and should demonstrate the possibility of preparing them at low cost and little effort with student collaboration. This would diminish de-

pendence of teachers on parents, Ministry of Education and other external institutions with respect to supply of materials.

13. Training should also demonstrate to the teachers, through practical classes or description of successful experiences, the usefulness of the new books in teaching.
14. Training should give more attention to practical classes and reinforcement in the three subjects, especially Reading, where the greatest difficulty in effecting change was encountered.
15. The program should provide a periodical reinforcement system for teachers, which could consist of visits by supervisors to schools where practical classes and orientation are given to teachers, and through the formation of groups or work teams distributed in small geographical zones. These groups, on a rotation basis, could lead an interchange of experiences, abilities and accomplishments in classroom among a greater number of teachers.

#### Organization

1. In order to obtain better results in the Program, differences in geographical areas, types of schools and other teaching training needs should be studied. One way to find alternatives would be a survey of particular needs of schools located in rural areas, one-teacher schools; schools with more than one teacher, teachers who have no pedagogic background and those who do have pedagogic background.
2. Program goals should be focused not only on the number of teachers trained but rather the percentage of teachers trained who can be expected to practice what has been taught.
3. Program managers should request Ministry help to gain supervisors' support. These supervisors could promote the use of textbooks, strengthen concepts provided by training and provide feedback to teachers in order to promote greater change in teacher behavior.
4. The supervisors should receive similar training so that they will become truly supporting elements for the Program and for the new educational techniques.
5. For a better operation of the Program, managers could request the cooperation of pertinent authorities who could supply materials in cases where these are not available.

6. Instead of selecting new groups of teachers to train, Program coordination should program the follow-ups to teachers who were previously trained.
7. Program coordination should take adequate steps in summoning teachers to follow-up training to avoid absences.
8. The Re-training Program should maintain better coordination with the School Textbook Department so that book distribution is made simultaneously with training.
9. If one of the Program objectives is to bring about a greater use of textbooks by teachers and students, it should include a promotion phase dedicated to clarifying some of the teachers' beliefs concerning their ineffectiveness.
10. Program leaders should give incentives to trainers to promote their active participation in the training design, planning and decision-making involved in the Program, especially with respect to goals, objectives, length of seminars, training policies, formation of working teams, etc.
11. Program managers should allow time for periodical meetings that would give trainers an opportunity to exchange working experiences, review accomplishment of program goals, prepare new work plans, and if necessary redesign and establish new goals. This would result in a better adjustment of training to school needs, and would give growth opportunities to trainers.
12. Program plans should provide trainers sufficient reading and advisory material to enable them to improve their professional proficiency.

#### Recommendations of Teachers

These recommendations are presented as stated by the teachers visited, and are sub-divided similarly to those of the study.

#### Training and Follow-up

1. Trainers should give orientation on the differences in the way a teacher should work in one-teacher schools and schools with more than one teacher.

2. Trainers should visit schools and give practical classes in the three subjects.
3. Should teach us the use of the other two textbooks besides the "Caritas Alegres."
4. Should teach us how to prepare materials
5. Should teach us how to keep children active during classes.
6. Should motivate teachers in the courses.
7. Trainers should teach how, when and where penmanship should be introduced.
8. Training should be given in accord with the educational realities of the country, as revealed by the teachers themselves.
9. Courses should be given during at least one month.
10. Training should be continued to improve or strengthen teachers' knowledge.
11. Distrust existing with respect to effectiveness of the method used with the new textbooks should be eradicated.
12. Better training in the use of textbooks should be given so that apprehension may disappear.
13. More details on Science and Reading should be given.
14. Orientation should take into consideration the differences in socio-economic and cultural characteristics between the Sierra and Coast, and between city and rural areas.

#### Organization

Teachers suggest:

1. That the Ministry should be organized first before they try to organize the teachers, because discrepancies exist between orders given by the Ministry, those given by supervisor, and the orientations provided in the training course.
2. The same books, educational methods and systems cannot be adopted in every school in the country. Textbooks should be in accord with national realities.

3. The Ministry of Education should try to provide every public school with textbooks.
4. I would like timely training seminars, just before the new school year begins, at which time the use of textbooks can be started.
5. We should have varied working materials which should be provided by the Ministry.
6. The Government should distribute textbooks and guides without charge.
7. Programs or study plans should have continuity, starting with first grade through sixth grade, in accordance with first and second grade textbooks published.
8. Training should be given to all teachers and not only to first grade teachers, because a rotating system is used in the schools.
9. Ministry of Education representatives should visit every school, especially in rural areas, so they can see the differences in needs and community living standards. They could also take advantage of these visits to instill in parents the importance of using new textbooks and educational techniques.
10. Textbooks should be printed on better paper.
11. Better located, bigger and brighter classrooms should be provided for first graders.
12. Any books available should be used this year, and next school year should be started with the new texts.
13. Quarterly evaluation of schools should be performed, and training of teachers should be provided more frequently.
14. Supervisory centers in provinces and principal cities should be created as an efficient source of support and orientation to teachers.
15. If these new textbooks are to be used, publication of other textbooks should not be permitted.
16. Better communication systems should be established in order to coordinate training activities.
17. Textbooks should be printed using better colors and illustrations, and they should be smaller.

18. Explanatory pamphlets should be published containing information on teaching/learning, creativity, games and didactic material.