

**INSTRUCTIONAL TELEVISION IN EL SALVADOR'S
EDUCATIONAL REFORM**

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The Setting

The Central American republic of El Salvador is among the smallest and most densely populated countries of the world. With approximately 3.5 million inhabitants and an annual population growth of 3.5 percent, the nation's limited resources must be spread thinner with each passing year. Agriculture is the basis of the Salvadoran economy and, although agricultural production has continually improved, the country has had to increase markedly its imports of basic food commodities in recent years. Despite such imports, the most recent study of nutrition levels revealed the majority of the population remains deficient in both calorie and protein consumption.¹

Compounding the pressure of population growth in El Salvador is a broad range of economic and social problems common to Third World nations. The wealth of the country is concentrated in very few hands, while the vast majority of the people live at or near the subsistence level. The most recent survey of land ownership revealed that a majority of El Salvador's productive land was controlled by less than two percent of its land holders.² These individuals exercise great economic and political power. Their large estates produce the nation's main export crops, coffee and cotton, and they employ many thousands of agricultural workers. All told, approximately 60 percent of El Salvador's active work force is engaged in agriculture, although due to the seasonal basis of the work, most agricultural workers are actually underemployed, earning low wages and enjoying little, if any, job security.

(1) Inter-American Development Bank, Social Progress Trust Fund, Ninth Annual Report, Washington: 1969.

(2) Republica de El Salvador, Ministerio de Economía, Dirección General de Estadística y Censos, Anuario Estadístico, 1968, San Salvador: 1968.

From the time El Salvador won her independence, the country has been dominated by a small group of wealthy land owners, by the army, or by a coalition of the two. Military men have controlled the political scene since 1931, and nine of the last 10 presidents of El Salvador have been army officers. With the military in command, the political situation has remained relatively stable. Nevertheless, the pressures created by El Salvador's rapid population growth militate against political conservatism and the country's current generation of elected military leaders have moved gradually toward more liberal social policies and reforms. In recent years, the greatest emphasis has been placed on the development of the country's human resources and the reform of her educational system.

Origins of the Educational Reform

Educational reform emerged as an important government priority during the last decade when El Salvador's leaders decided that only through a comprehensive upgrading of the school system and the provision of new kinds of training opportunities could the nation begin to resolve its pressing economic and social problems and, at the same time, carve out a larger place for itself in world trade.

To remedy the numerous problems that had been inherited from previous administrations and to streamline an educational system whose goals and procedures had ceased to fit the needs of El Salvador, a new Minister of Education, Lic. Walter Beneke, set forth a comprehensive, five-year reform plan in 1968. The plan was systematic and thorough in its approach, touching virtually every aspect of the educational system.

The major reforms included:

1. Reorganization of the Ministry of Education
2. Extensive teacher retraining
3. Curriculum revision
4. Development of new teachers' guides and student workbooks
5. Improvement of the system of school supervision to provide "advice" instead of inspection
6. Development of a wider diversity of technical training programs in grades 10-12
7. Extensive building of new schoolrooms
8. Elimination of tuition in grades 7, 8, and 9
9. Use of double sessions and reduced hours to teach more pupils
10. A new student evaluation system incorporating changes in promotion and grading policies
11. Installation of a national instructional television system for grades 7-9

Although some of these changes were enacted immediately, most were begun with the understanding that additional planning, experimentation, and adjustment would be required and that major changes could only be introduced on an incremental basis. However, the five-year reform timetable was a strict one; it coincided with a single presidential term and Minister Beneka was anxious to prevent the reform from being undermined or stalled through bureaucratic opposition or delay.

The Catalytic Effect of Television

The ITV system was thrust immediately into the forefront of El Salvador's Educational Reform because it exerted a powerful and determining influence over the content of the other reforms and, particularly, their rate of development. By the time other elements of

the Reform began to take shape, the Division of Educational Television, assisted by the U.S. Agency for International Development, was already producing nineteen programs a week for use in El Salvador's secondary schools (grades seven through nine). When leaders of the Reform insisted that televised instruction not be started ahead of concomitant changes in curriculum, teacher training, and supervising, pressures grew on other divisions of the Ministry to keep pace with television's timetable.

The Salvadorans realized that if television was to be relied upon to upgrade the quality of instruction at the secondary level, the broadcast lessons would have to reflect a reformed curriculum. In Minister Beneke's words: "The present curriculum is archaic and is not responsive to the real needs of life. Since television is only an instrument for implementing curriculum, the quality of the whole educational system depends on the quality of the curriculum. The effective establishment of instructional television requires at the very least the elaboration of new and better curricula."* Thus, from the outset of the Reform, the revision of the curriculum for grades seven through nine was tied closely to television.

With televised instruction and a revised curriculum destined for all of El Salvador's junior high schools, the Ministry's planners further decided that classroom teachers would have to make fundamental changes in their traditional teaching styles. To ease the transition, a year's retraining course was developed and the system of school supervision was redirected away from the narrow task of inspection toward a more open and positive approach emphasizing classroom observation and

* Republica de El Salvador, Plan Quinquenal 1968-1972, Sector Educacion (DI No. 659), Consejo Nacional de Planificacion y Coordinacion Economica (CONOPLAN), San Salvador: 1968.

counseling. Finally, the new curricula and the new teaching methods suggested the need for improved classroom materials for both teachers and students. These classroom materials were initially developed and distributed by the ITV Division.

ITV was unquestionably the most visible and highly publicized of El Salvador's educational reforms. Articles appeared in the nation's press documenting the early interest in ITV and subsequently recording the government's efforts to construct a new studio and install television sets in Salvadoran schools. The inauguration of the San Andres studio by Presidents Fidel Sanchez Hernandez and Lyndon Johnson in July, 1968, focused public attention on the ITV project. The publicity given ITV overshadowed the fact that other significant changes were occurring in El Salvador's educational system. In 1970, when a sample of parents were asked to recall what they knew about their country's Educational Reform, most could only remember television.

Finally, ITV was the component of the Reform that demanded the most foreign technical assistance. Among the forty or so foreign advisers who worked alongside Salvadoran counterparts in the Reform projects, more than thirty had at least some association with the ITV system. Such a concentration of resources sustained the momentum of the project and maintained ITV's preeminent position.

El Salvador's experience suggests that to be an effective instrument of change, major educational innovations such as television cannot simply be appended to traditional structures; rather, they must be accompanied by multiple changes in other areas of the educational system. As the Reform progressed, most Salvadoran leaders expressed the view that the Educational Reform could not have been implemented without

the catalytic effect of television. They argued that while many of the changes instituted in the 1968-1972 period were long overdue and would most likely have been implemented by any new minister, the ITV system provided the vital spark and necessary impetus to reform.

ITV's Effects on Students

In 1968, the year the reform began, there were approximately 20,000 students enrolled in El Salvador's public seventh, eighth, and ninth grades. They, along with some 23,000 private school enrollees, constituted less than a quarter of the young people of eligible age (13-15) for the three grades. By 1973, more than 65,000 students were enrolled at the same level. Counting an additional 26,000 private school students, the seventh through ninth grade matriculation was elevated to 34 percent of the 13-15 year old population. The large increase in enrollment brought on by the elimination of tuition also resulted in a change in average social background of students, with more students from poorer and rural homes able to register for the first time.

On a regular basis from 1969 through 1972, an evaluation team composed of researchers from El Salvador and Stanford University administered General Ability and Reading tests as well as mathematics, science, and social studies achievement tests to three cohorts of Salvadoran secondary students. Cohort A, which began seventh grade in 1969, included students studying with television and other elements of the Reform and students learning in the traditional way. Cohorts B and C, which started seventh grade in 1970 and 1971 respectively, included only students from Reform classes. These groups were divided into ITV and non-ITV subsamples.

Over three years, the ITV students gained from 15 to 25 percent more on the General Ability tests than did their non-ITV peers. The advantage was unaffected when controls for socioeconomic status and for individual student characteristics were applied. On Reading tests, ITV and non-ITV students gained about the same.

The results of the achievement tests were mixed: sometimes ITV students outperformed students in non-ITV classes and sometimes the reverse occurred. When the test results for three years (two years in the case of Cohort C) were combined, however, ITV students in every cohort had an advantage over non-ITV students in each subject. In math this was the result of an ITV advantage in all three grades. In social studies and science, the cumulative advantage was due to particularly strong 7th grade performances which outweighed the mixed 8th and 9th grade results.

At the outset of the Reform no criteria were established to judge learning effectiveness. No one in the Ministry of Education or in any of the outside organizations providing technical assistance suggested how much extra learning should be expected to justify the investment in so many innovative programs. Nevertheless, the Educational Reform and particularly its ITV component were successful in enhancing student learning. The test results revealed a clear trend: ITV learning gains were significantly greater than the non-ITV gains in most comparisons. Reform classrooms with ITV, retrained teachers, a revised curriculum, and new materials proved to be a better learning environment than either traditional classrooms or classrooms with all elements of the Reform except for television.

The collection of learning data was supplemented by periodic

surveys of student attitudes and aspirations. A majority of students were favorable toward ITV throughout the four years in which attitudes were surveyed. However, high initial enthusiasm declined somewhat as students progressed from seventh through ninth grade. Attitudes toward English benefited most from the introduction of ITV, a subject little liked by non-ITV students, but well regarded by ITV students. Disadvantaged children and children with low general ability were more favorably disposed toward the teleseries than their more advantaged peers.

Advanced schooling was regarded by students as the key to success in El Salvador. More than 90 percent of the students surveyed in each of the three cohorts wished to continue their studies beyond the ninth grade, and approximately 50 percent hoped to obtain a university degree.

Given El Salvador's high level of unemployment and the shortage of well paying jobs at the middle level, it was not surprising that so many students should aspire to university careers. The students recognized that the best jobs would be awarded to university graduates, and that a good job was the best guarantee of social prestige and mobility in the years ahead. To this extent, their educational aspirations must be considered realistic. These same aspirations must be considered unrealistic, however, in terms of the students' actual chances of fulfilling them.

Unfortunately, it was not possible to determine whether the Reform had produced great changes in student aspirations since there was no comparable baseline data from before 1969. Nevertheless, the data gathered in the four year period conveyed a warning: the aspirations of students for both education and jobs were so high as to present a

real problem to Salvadoran planners in the future.

ITV's Effects on Classroom Teachers

Under El Salvador's Educational Reform, a concerted effort was made to retrain all secondary teachers so that they could work effectively with a revised curriculum and a new ITV system. The observational evidence from the classroom indicated that as the Reform progressed, Salvadoran teachers began to rely less on lecturing or rote drill and more on student activity; they asked more "thought" questions; and they were encouraging students to ask their own questions, state their own opinions, and work on individual projects. These characteristics were all observed frequently enough to suggest that El Salvador's classroom teachers were changing.

Perhaps the best way to sum up the teachers' reactions to television would be to say that the "rosy glow" cast by ITV in 1969 faded by the end of 1972. Nevertheless, teachers remained predominantly favorable to the use of television in their classrooms. Despite disagreement with Ministry officials on the way some changes had been implemented, the majority of teachers were in accord with the goals and philosophy of the Educational Reform.

Did the downward trend in teacher attitudes during the Reform's first four years belie the wisdom of spending so much time and money on their retraining? The answer to this question depends on how legitimate one considers the teachers' grievances. What accounted for the teachers' negative attitudes was not ITV or the Reform as such, but rather the poor working conditions (ever larger class sizes, grueling double sessions, lack of classroom materials) and low pay under which they continued to

labor. Given these conditions, it was not surprising that teachers were dissatisfied or that they twice went on strike.

Problems of Bureaucratic Integration

The teachers' strikes illustrate the severity of the problems that occurred when teachers and administration were required to accept procedures and policies they themselves had not made. Of course, some changes were integrated into the school system more easily than others. For example, a new secondary curriculum was made and accepted without great trouble. New promotion policies were accepted, but not integrated so fully. The closing of numerous teacher training schools was resented, even though the effect of reducing teacher unemployment and the high praise eventually accorded the centralized teacher retraining program went far toward winning teacher acceptance.

The transformation of the supervisor-inspector role into that of the supervisor-counselor presented the greatest difficulty. The new role was a very unfamiliar one in El Salvador and the supervisors opposed it because they perceived a loss of authority and prestige. Ministry of Education bureaucrats opposed it because they, at first, did not exert direct control over it. An apparent mistake was made in putting a supervisor corps into the ITV Division instead of into the departments of the Ministry that had direct charge of the schools and the teachers.

Despite these difficulties, the Salvadoran experience underscores the advantages of putting local people in charge of developing all aspects of a new ITV system instead of relying on outsiders to do it. After three years, ITV was more firmly established in El Salvador,

the local component of experienced television people was more firmly established, and the outlook for continuing and expanding the system was better than in other countries that have relied on foreign experts to do the actual production and tele-teaching. On the other hand, the experience also illuminated the disadvantages of relying so much on local but inexperienced production talent.

Perhaps the greatest shortcoming of the El Salvador project, and one of the great complaints of the classroom teachers, was the uneven quality of the television lessons. The conclusion that seems to emerge from this experience is that as a country wants to "learn by doing" (which has advantages over the long term), it must allow enough time before going on the air to train production teams, to let them gain experience, and to test and remake as many programs as possible.

The Salvadoran experience also suggests that beginning one grade at a time avoids many problems that a system can get into by introducing television into a number of grades simultaneously. It was also possible in El Salvador to try out the television for a year in thirty-two pilot classrooms before expanding it to the entire school system. At the end of its first broadcast year (1969), the producers were able to revise and improve the vast majority of 7th grade programs before they were transmitted on a nationwide basis.

ITV systems never develop quite as smoothly or as quickly as expected and El Salvador was no exception in this regard. Some of the more obvious reasons why the Salvadoreans fell behind schedule were related to the war with Honduras and the political repercussions of the war which delayed the approval of the major loan from the United States. Furthermore, El Salvador, like all other countries found that it took

more time than expected to build an adequate administrative apparatus to design and carry out such a large number of educational reforms simultaneously.

The Costs and Efficiency of ITV in the Reform

Research on the efficiency and costs of El Salvador's use of ITV and other key elements of the Educational Reform produced the following results:

- - Enrollments in grades seven, eight, and nine expanded by 300 percent (from 19,104 to 65,390) between 1968 and 1973. The increases reduced the traditional bottleneck between sixth and seventh grades, so that almost 60 percent of the students entering sixth grade in 1971 continued on to seventh in 1972.
- - The number of dropouts and repeaters within the three grades diminished after the initiation of the Reform. This increased efficiency was due to an easing of standards as well as an improvement in the quality of teaching.
- - Costs of the ITV system were divided into two components: fixed costs (including studio facilities, production costs, etc.) which were the same no matter how many students were watching, and variable costs (television receivers, student workbooks, etc.) which increased with the number of students in the audience. The total fixed costs per year (apportioning the cost over 25 years of the project to each year under assumptions specified in the text) were estimated to be \$1.1 million. Of that sum, approximately \$800,000 was the cost to the Salvadoran government; the rest consisted of grants from USAID and other foreign agencies.

To the fixed costs must be added the variable costs and, for each student in the system, there was a yearly cost of about \$1.10. Thus, in 1972 when 48,000 students were enrolled, the per student cost of ITV to the government of El Salvador was \$17.75, while the total cost (including outside loans and grants) was \$24.35.

Knowing the number of students actually enrolled in the first seven years of the project, and projecting enrollments through year 25 of the project, it was possible to estimate the average cost per student during any part of that period. This approach recognized that in the early years of a project fewer students were likely to be served, but as the project matured, many more students would be included. Over the full 25 years, the average yearly cost per student was calculated to be \$17.

The introduction of ITV was accompanied by an increase in the number of students per class (from 35 to 45) and an increase in teacher load (40 percent additional classroom hours) with only a 20 percent increase in teacher pay.

Conclusion and Implications

Given the accomplishments of the first four years, what general conclusions can be drawn from El Salvador's experience with ITV, and how applicable are such conclusions to other countries?

El Salvador's Educational Reform, and particularly its ITV system, accomplished what they were expected to do under the original five-year plan. The bottleneck in secondary education was widened and with each passing year more students poured into the seventh grade. A greater percentage of these students were from disadvantaged backgrounds

and most were expected to complete the ninth grade. Largely because of ITV, the great expansion in enrollment did not lead to a decline in learning. In fact, just the opposite occurred; students learned more under the Reform with ITV than they did under the traditional system.

Although ITV was unquestionably an expensive innovation for El Salvador, the Ministry of Education managed to offset some of its cost by increasing both classroom teachers' hours and class size. Given the projected rise in enrollments, the per student costs of instruction under the Reform with ITV will eventually be less than if the Reform had been introduced with traditional class size and teacher loads.

More students, better learning, and equal or lower per student costs: these are notable and impressive results. How did El Salvador achieve them when so many other countries have failed or fallen short in their efforts to introduce ITV?

The Salvadoran experience underscores the idea that ITV or any other instructional technology is best conceived in terms of broad system needs. ITV was not imposed over traditional structures; rather, it was coordinated with other major changes in El Salvador's educational system.

Nevertheless, ITV played a catalytic role in the Reform because it magnified the need for change in numerous areas. When the government decided to invest in television, it made sense to revise the curriculum so that the broadcast lessons would carry the most modern knowledge and teaching methods. Similarly, when El Salvador introduced ITV in the classroom, something had to be done to prepare the classroom teacher. Consequently, a major teacher retraining program was organized, and so on for the reforms in supervision and evaluation and the provision of new materials for both teachers and students. Not all of these changes

were successful, but such changes do not come easily in national school systems or ministries of education.