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ABSTRACT

Educational Reform in El Salvador is an intensive effort to upgrade and expand the seventh, eighth, and ninth grades. It is built around instructional television, but also includes curricular revision, the retraining of teachers, new classroom materials, and other important elements. 1971 was the third year of the Reform. Two developments made 1971 an exceedingly abnormal year for Educational Reform--the elimination of tuition for grades 7, 8, and 9 increased the school population by 35% and a teachers strike disrupted schools for two months. To the extent possible this report attempts to compare the third year with previous years of the reform and to discern the effects of the broadened school population and the strike on the Reform. The effects on students, teachers, and on parent's aspirations for their children are reported, along with a brief administrative history of the Reform. (JY)

TELEVISION AND EDUCATIONAL REFORM IN EL SALVADOR

Report on the Third Year of Research

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Research Report No. 10

This is one of a series of reports of research on the Educational Reform Program of El Salvador, and especially its use of instructional television. This report has been prepared by members of the Institute for Communication Research, Stanford University, on behalf of the Academy for Educational Development, under contract with the U.S. Agency for International Development.

March, 1972

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Many have contributed to the research reported here. For the third year, Lic. Luis Fernando Valero Iglesias, and his Section of Evaluation, Division of Television Education, in the Ministry of Education, have collaborated extraordinarily. Mario Rodriguez, Ana Enriqueta Castellanos, Gladys de Hernandez, Leonor Hurtado, Celia Lopez, Luisa de Guadron, Yolanda de Palacios, Lesvia Salas, Mabel Villalobos, Maria Teresa Alvarado, and Rosa Miriam de Martinez worked carefully and well.

Ana Maria de Manzano, senior Salvadoran in our own field research office, worked with Lic. Valero to integrate feedback into the ETV system. She, as well as the other members of our research staff, Br. German Rodriguez, Maria Ester de Zamora, Nohemi de Ehrhardt, Jose Velasco and Victor Zelada have been skilled, enthusiastic and hard-working.

Also we wish to thank those who worked at Stanford. Bruce McKay did the necessary computer programming and Mrs. Ellen Wilson prepared the final manuscript.

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SUMMARY

The Project

Educational Reform in El Salvador is an intensive effort to upgrade and expand the seventh, eighth, and ninth grades, formerly called Plan Basico, now known as the Third Cycle of Basic Education. The Reform is built around instructional television, but includes curricular revision, the retraining of teachers, new classroom materials, and other important elements. An evaluation team has been observing and studying this project since six months before it went into the schools. 1971 was the third year of the Reform, and this is the third annual report of the evaluation team.

The Year

In field research, conducted on an annual cycle in a developing country, abnormal years often seem to be the norm. This was an exceedingly abnormal year for Education Reform in El Salvador.

Two developments, in particular, were responsible. One was the elimination of tuition in the Third Cycle, opening it to every qualified student in the country. 38,000 entered the Third Cycle--an increase of 35 percent over the previous year. Schools had to go on double shifts, and teachers were asked to take on additional work.

The second development was an exceedingly bitter strike of teachers, beginning on July 5, lasting nearly two months. Many tele-

vision production workers (most of them former teachers) also walked out. Ill feeling carried on even after the settlement, and many teachers had to be shifted to other schools. Furthermore, some of the ill-feeling of the teachers against the Ministry of Education was directed at the Ministry's special program in the schools--the Reform, and particularly the television. Schools were disrupted and disorganized, in greater or less degree, from July to the end of the year. Television never did start up again in the ninth grade, and was out of phase with many classrooms in the seventh and eighth grades.

The result was a set of achievement and attitudinal data which serves very poorly as a measure of the Reform, but does provide some interesting insights into the effects of a teachers strike. In El Salvador, in 1971, the effects were profound.

Effects on the seventh grade

1. Insofar as the effects of broadening the school population can be separated from the effects of the strike, it can be noted that the seventh grade in 1971 came on the average from poorer homes, where the fathers were less well educated, than previous seventh grades; and for the first time, the majority of the students were girls. The entering scores on general ability and reading averaged over 10 percent lower in 1971 than in 1970.

2. The 1971 class entered with lower achievement scores, and gained less in all subjects than the 1970 class. Our analysis leads us to conclude that the reduction in gains must be attributed more to

the strike than to initial abilities.

3. Reform classes with television gained more in Science and Social Studies than classes that had every element of the Reform except television. There was no significant difference in Mathematics.

4. Seventh grade student attitudes toward the Reform and toward television were significantly less favorable at the end of 1971 than at the end of 1970. Student attitudes seemed to reflect teacher attitudes.

5. There seemed to be some evidence (although no proof) that television classes were more bothered by the disruption than classes without television. Television is not flexible in adjusting to different classes at different places in the year's schedule. Teachers working in a classroom without television under post-strike conditions might have found it easier to make the necessary adjustments.

Effects on the eighth grade

1. All gains in the eighth grade were less than in 1970. With no change in student background and ability, most of this must be attributed to the strike and resulting disorganization.

2. Student attitudes were uniformly less favorable than in 1970. Significantly, these included the students' estimate of how well their teachers liked to teach with television, and their estimate of their parents' attitudes toward the innovations in the schools.

3. Dissatisfaction was expressed with the quality of a number of the television programs.

Effects on the ninth grade

1. In the ninth grade, where disruption was greatest, comparisons of television vs. non-television classes may be of dubious value. However, all Reform students came into the ninth grade, after two years of the new system, scoring higher (several points higher in Science and Social Studies, slightly higher in Mathematics) than the other students. The pattern of learning was irregular. Reform students simply carried their initial advantage in Science throughout the year. In Mathematics, they started with only a slight advantage but gained significantly more than the others. In Social Studies, the initial advantage of the Reform students was completely reversed, and non-TV students pulled themselves up by the end of the year to approximately the same level as the TV classes.

2. Attitudes were uniformly less favorable than in previous years. Students after three years of experience with television and the Reform had more doubts about its usefulness than ever before. The question should be raised, of course, whether television, given the situation, was very useful to the ninth grade. It must be remembered that there were no TV programs after July.

3. One example of how student attitudes must have reflected teacher attitudes was the response to an item, "Classroom teachers prefer to teach with TV..." In October, 1970, 65 percent of these same students agreed with the statement; in October, 1971, only 45 percent.

Effect on teachers attitudes

1. Attitude tests were given six to eight weeks after the strike ended. Bitterness persisted among the teachers. Problems of trying to make up lost ground, to get started in a new school, were salient. Television was associated with the Ministry, and seen in light of the union argument that television money should be given instead to teachers.

2. Unfavorable attitudes were generalized beyond television to education in general. 27 percent of teachers, as against 18 in the previous year, said that "teaching doesn't give much satisfaction." Only 13 percent (as against 20 in 1970) said they would encourage their best students to become teachers.

3. Beyond the effect of the 1971 experience on attitudes toward television, there was some evidence that three years of experience with the new system led classroom teachers to be more confident in their own skills and to judge fewer of the teleteachers as superior to "the majority of classroom teachers."

4. Reflection of the increased enrollments in seventh grade was clear. 39 percent of teachers, as compared to 26 in 1970, said that too many students in class has created a very serious problem. 55 percent, against 36 percent in 1970, agreed that "an increase in enrollment decreases the quality of education."

Confirmation of 1970 results

In 1970 we were forced to speculate on the effect of giving

ETS examinations several months late. Analysis of 1971 results, in terms of pre-examination learning, now permits us to say with some confidence that there must have been considerable learning in 1970 before the initial examinations were given, and if the examinations had been administered at the beginning of the year they would almost certainly have shown a stronger advantage in gain for television classes. (See Chapter 3--eighth grade results).

Effect of the new system on promotion of students

There is very interesting evidence from the first three years of the Reform, indicating that the proportion of students winning promotion increased steadily as the new system, with television, retrained teachers, and new curricular materials, moved through the seventh, eighth, and ninth grades. There are, however, some possible alternative explanations for these data which cannot entirely be ruled out.

New data on parent aspirations for their children

Last year we reported a study of student educational and career aspirations that indicated a very high proportion of the students aspiring far beyond their parents' education, indeed looking toward advanced education and professional careers. This year we supplemented that by an interview study of 247 parents. The general findings:

1. Parents have relatively little contact with or knowledge of their children's school, but place high importance on education per se, and would like their children to have careers with high mobility and prestige.

2. Their aspirations for the children tended to be a little lower than those of the children for themselves.

3. If parent aspirations for their children are higher than average, the children's aspirations tend also to be higher than average. However, there is little evidence of direct influence.

4. The parents tended to see an ability to obtain a steady, well-paying job as the sole justification for advanced education. The survey suggests that parents may be heading for dissatisfaction if the training their children receive does not lead to the kind of employment desired. This, like the potential frustration of the students, many of whom will not be able to achieve the higher education or the professional careers they want, is a danger signal.

History of the Reform

In this annual report (Chapter 6) we have placed some material and findings from the administrative history of the Reform, which has now been completed through much of 1971. These samples include a chronological outline of the early history of the Reform, showing how much activity went on before the project ever reached the schools, and a few conclusions drawn from El Salvador's experience. Some of these conclusions:

1. The importance to an innovative project of strong leadership.

2. The importance of local initiative.

3. The importance of integrated change--not merely introducing television, but advancing at the same time in curricular developments, teachers training, classroom materials, evaluation, etc.

4. The importance of effective advisers. In general, the more specific an adviser's job, the more likely he is to be successful.

Research to come

The teachers strike of 1971 seriously disrupted the rhythm of Educational Reform in El Salvador. It was also a stiff blow to a four-year evaluation study.

In 1972, the fourth year of the Reform and of our study, we must interpret results with some consideration as to how much they reflect the 1971 trauma and how much they reflect the potentials of the Reform. Will the learning scores and the attitudes return to their pre-strike levels, or has some long-term damage been done to the system?

Therefore, in addition to the usual data on ability, learning, attitudes, retention, and so forth, we shall be making some rather special studies in an attempt to deepen and enlarge the picture: an intensive observational and testing study of two classrooms using television for the first time; a study of a sample of the first three-year graduates of Reform curriculum, to find out what happened to their plans for further education and for careers; a study of changes in ability scores during the four years; and a study of the effect of television on problem-solving ability. We shall continue to work with feedback of learning results, and shall publish a report on this method; and also, to the extent possible, we shall work on the task of specifying objectives for television lesson plans, and on the pretesting of television programs. Of course, the historical account will be kept up to date.

There will be a summary report of the fourth year of research in the spring of 1973, and a summary of the entire project in the summer, 1973.

Chapter One

THE THIRD YEAR OF EDUCATIONAL REFORM IN EL SALVADOR

Some years, in field evaluation research, leave the researcher feeling like a fisherman whose water has been stirred up by bad weather, and who consequently has caught nothing except minnows and old shoes and would rather throw the catch back and forget the whole experience.

1971 was such a year in El Salvador.

For readers unfamiliar with the El Salvador Educational Reform, it may be well to explain that this is a broadly conceived effort to upgrade and expand seventh, eighth, and ninth grade education throughout the country. These grades, which El Salvador regards as key not only to national plans for the educational system, but also to plans for economic development, have been called Plan Basico, but are now renamed the Third Cycle of Basic Education. The Reform is built around extensive use of instructional television in the schools, but is far more comprehensive than that. It has included curricular revision, retraining of all Third Cycle teachers, preparation of new classroom materials, a new supervisor corps, and an ongoing program of evaluation. Readers will find background information on the Reform in Chapter Eight of this report, and in the previously published reports of research during the first and second years of the projects (see inside cover of this report for titles).

1971 was the third year of the Reform in the schools. It was an extremely important year--the first one in which television and the

other elements of the new system had been extended throughout all the Third Cycle, although only to a limited number of experimental classrooms in the ninth grade. More important, it was the year in which tuition was no longer charged to Third Cycle students, thus opening that part of the educational system to every qualified student.

As will be explained in greater detail in the following pages, the expansion of the Third Cycle created severe problems. Both classrooms and teachers were in short supply. Most schools went on double shift, and most teachers were asked to take on extra duties. But the amount of disruption was very little compared to what happened after July 5 when the powerful teachers union walked out on strike.

The double shifts and increased duties must have had something to do with that event. Basically, however, it was a question of salary, exacerbated by ill feeling between the union and the Ministry. More details on these and other events of the year will be found in the following pages. Suffice it here to say that the strike lasted about two months, during which time many schools were not functioning and others were functioning with considerably reduced attendance and instruction. Extremely bitter feelings grew up around the strike, and even after the settlement there was less than complete satisfaction and much of the teachers' hostility toward the Ministry was generalized to the Ministry's innovation--the Reform, and in particular the speed with which it was introduced.

The strike itself would have made an interesting case study, but during that time the schools and the studios (also on strike) were closed

to research, and it would have been politically unwise for researchers, especially foreign researchers, to intervene in the strained situation, even to the extent of close observation. We used the period of the strike to do such things as complete interviews with government officials and educational advisers, examine documents, analyze data, prepare a case study of the Reform, and prepare the history of the project (published as An Administrative History of El Salvador's Educational Reform, by John and Judith Mayo).

From the beginning of July until the end of the school year in November, therefore, the schools were, to greater or less degree, disorganized. After the strike, many teachers had to be shifted from school to school because parents resented their part in the strike. From July onward there was a very imperfect correlation between the television broadcasts and classroom activities. In the ninth grade, the television programs ceased in July and never did start again. Some schools stretched out the year a full month longer than others.

This was the situation in which the research team was forced to gather end-of-year achievement and attitudinal data.

Obviously the year was not one that could validly be compared with the previous two years of the Reform or the fourth year, now underway in what we hope will be fairly peaceful conditions. But it does give us a chance to draw some conclusions concerning the effect of a strike on the students and teachers of a national school system. This we have tried to do. In this chapter we shall consider in more detail what happened during the year: in the following chapters, the effects of these events on the system.

Changes at the beginning of the year

1971 began boldly. The Ministry always planned that nine years of schooling would be compulsory. Before the school year began in 1971, two major steps were taken to help make that goal reality. First, in an administrative change, the three years of Plan Basico, seventh, eighth, and ninth grades, were removed from the Direction of Secondary Education and joined with the six years of primary school under the new Directorate of Basic Education, and renamed the Third Cycle of Basic Education (which we shall henceforth call it). Secondly, tuition for the Third Cycle was made free. The effect of these two changes was profound.

Offering the three additional grades of education without cost led to a large increase in the number of students attending those grades. In February, 1970, 28,000 students were matriculated. In March 1971, over 38,000, an increase of 35%, were admitted. To those accustomed to United States school taxes (and United States incomes) a total cost of between $30 and $40 dollars per year may not seem much of a barrier to sending a child to school. For a Salvadoran with mean income around $250 (and modal income lower) and a large family, that barrier can be insurmountable. There were even unconfirmed reports that some parents withdrew their children on discovering that there was to be a $7.00 yearly charge for student workbooks.

This large expansion, concentrated as it was almost entirely in seventh grade, led to two further problems, lack of classroom space, and shortage of teachers. To solve the first difficulty, all seventh

grades were placed on double session. Generally students who lived in the town where the school was located came in the afternoons. Morning sessions were reserved for students from surrounding villages, who would have found it difficult to find transportation home after the second session ended at seven p.m.

The second problem, a shortage of trained teachers was not so easily solved. The Ministry increased the legal instruction hour load for each teacher. Previously teachers were expected to teach twenty-one class hours plus take nine additional hours of non-teaching responsibility. Now, twenty-five teaching hours were demanded, but non-teaching time was not asked.

Even this was not enough. Most schools were short one or more teachers for the first several months of the school year. Each school solved this problem its own way. In some places, students watched the television classes without teachers, and thus without motivation or reinforcement sessions. In others, two classes of up to 45 students each crowded into a single classroom with one teacher. In other schools teachers took extra classes with or without overtime pay.

Finally in May and June a supplemental budget was passed by the National Assembly and more teachers were hired. Even so, throughout the school year, specialists in Science found themselves teaching Humanities and vice versa. Primary school teachers found themselves instructing in ITV classes without any retraining at San Andres.

We have evidence that teachers were pleased that more students were continuing their educations. However several expressed the feeling that they, the teachers, were being forced to bear much of the cost

of the expansion, in the coin of increased workloads. This resentment probably contributed to the midyear strike, of which we shall speak later.

The unification of the administration of the nine grades resulted in some subtler changes. Supervision had an erratic history in the previous years of the Reform. First, 7th, 8th, and 9th grade supervision was called utilization and was attached to the TV production division. Then it was switched to the control of the Division of Secondary Education in the Ministry proper. Extensive training was given the supervisors to insure their adopting a pedagogic rather than a record keeping role in the schools.

However, the coming of unification meant completely new organization and return to an old role for the supervisor corps.

Supervisors who had been trained to work in Plan Basico were placed in a unit with former primary school supervisors to work in all nine grades of basic education. This change also meant that supervision, in most cases, retained its administrative function and lost its pedagogic role. This was the case in particular because of the great number of administrative/mechanical problems that resulted from the unification and expansion, which had to be dealt with by the supervisors.

Teacher retraining moved in a variety of new directions. As in earlier years some 200 additional teachers went through the nine month retraining sequence designed to prepare them for teaching with television at the Third Cycle level. In addition two six-month retraining

programs brought school directors in for courses in school administration. While clearly an important step, this did cause difficulties at some schools, where inexperienced interim directors struggled with major headaches brought on by unification and expansion.

Television also became involved with teacher retraining. Twelve years of rewritten curricula in all subjects were sent out to schools just as the year was beginning. Many teachers in primary school found themselves at a loss, especially when it came to Modern Math. Third Cycle teachers had received nine months of retraining--primary school teachers only a few hours. In response to this reaction the Ministry went to a crash program of televised retraining. All normal classes were suspended for one week. The curriculum writers came together with the television production teams to prepare programs to explain the curriculum. The solid week of instruction was followed for several months by regular Saturday broadcasts of additional material. How many teachers took how much advantage of this non-compulsory instruction is not known. In any case the Ministry gave those primary school teachers who were uncomfortable with the new material permission to use the traditional curricula for one more year.

The television production division was forced to continue working at the overcrowded San Andres facilities. Although the equipment loan had been ratified in October of 1970, virtually none of that money was spent during 1971. A variety of difficulties dashed any hopes of using the money either to buy receivers or studio equipment, during the school year.

As expected, the television system expanded to the ninth grade. The same 32 experimental classes who had received seventh and eighth grade programs in the two previous years received ninth grade programs in 1971. In general, the production teams which had worked on seventh grade programs in the two previous years made the ninth grade programs. They also remade one-fifth of the seventh grade programs. Around 80% of eighth grade ITV programs were redone by the same production teams who had worked on those classes the previous year. Nearly all seventh and eighth grade public schools as well as over 100 private school classes studied with television. However, since the new transmitting facilities were not yet available, all programs had to be broadcast on the two commercial channels. Since those channels cannot be received in parts of the country, schools in those districts continued to work without televised classes. However they did have all the other elements of the Reform system including workbooks, teachers guides, and retrained teachers.

After this rough beginning, the school year moved more or less normally through the midyear point. There were still too few teachers. Double sessions left less time for extracurricular activities. However, television classes in all three grades were transmitted regularly, students arrived for their classes, and with the appointment of some additional teachers, the school system appeared to be adjusting itself to the major changes.

The Strike

But the trouble that was to lead to a teachers strike was

already brewing. Before the beginning of the school year, ANDES, the teachers union supported by most teachers, had submitted to the National Assembly a new salary scale law. This law was to provide both a generally higher salary scale and higher jumps in pay for each level of experience. The law was not considered by the National Assembly before June of 1971. At that time, leaders of the teachers union, in order to pressure the government, declared a one day work stoppage with the promise of further stoppages if the proposed law was not considered. The government agreed to consider the law before July and ANDES called no more work stoppages.

Concurrently, the Ministry of Education was preparing its own new General Law of Education which would make law most of the elements of the Educational Reform that had been instituted by administrative action. Included in this law was a proposal for a salary scale; ANDES leaders felt it was considerably less generous than the one they had requested.

By July 5, the situation reached an impasse, and ANDES members walked out of the schools. Although other issues were raised by both sides, the dispute was basically over salary. It was finally resolved two months later in complicated negotiations. It was a bitter dispute, perhaps out of proportion to the salary disagreement which instigated it. Street demonstrations, and fighting between police and demonstrators were common. Deep teacher resentments were directed toward Minister of Education Beneke and other government figures. The government, on the other hand, accused ANDES of fomenting the strike to embarrass

the government in an election year.

Because feelings ran so deeply, figures on the number of teachers in school and the number of students who received classes normally are difficult to compile. ANDES claimed a large majority of teachers stayed out. The government claimed that although a large number left in the beginning many teachers returned after staying out for a brief period. They believed a majority of classes were meeting.

For the seventh, eighth and ninth grade classes in our sample we have two estimates. 40% in seventh grade, 24% in eighth grade and 51% in ninth grade declared themselves so little affected by the strike that they did not need to make up lost time by staying through an extra month of school. However, these figures include classes which did not work normally during the strike, but managed to make up the lost time in other ways. By means of school-by-school visits after the strike, we concluded that only five schools out of the forty-three in the sample had worked normally during the strike. Outside of those schools, perhaps 15 to 25% of classes met, but sometimes with interim teachers and few students.

Television classes were continued throughout the strike period in seventh and eighth grade where there were a sufficient number of taped lessons. However, almost the entire production staff went out on strike in support of the teachers' demands. In ninth grade, where there was no backlog of taped programs, transmissions ended shortly after the strike began. Ninth grade transmissions were not to resume even when the strike ended.

When the strike officially ended, a good deal of reorganization was necessary. In the schools, it was necessary to transfer many teachers. Parents in some communities had become incensed against the striking teachers and refused to allow them to return to their classrooms. In some schools almost the entire faculty including the director had to be shifted. One imagines that this did not help students in reestablishing the continuity of their studies.

Television broadcast schedules were also a problem. It was decided that courses would begin again starting at the nearest previous natural division. Classes were extended for a month, so that teachers and students could make up for lost time (and striking teachers could make up for lost salary). Any material that a class had missed was to be made up in that extra month, although televised classes were not repeated during that time.

The school year shuffled to a conclusion in October and November, but that whole period was shadowed by the strike and its aftermath.

End of year changes

The last several months of the year featured several important changes, which since they are likely to affect the 1972 school year, should really be considered events of 1972.

First, Minister Beneke resigned his position as Minister of Education to become Minister of Foreign Relations. Senora Antonia de Gallindo, formerly Sub-Minister, took charge. An extensive consideration of Minister Beneke's role appears in the chapter on Administrative History.

All the conditions for the use of the AID loan funds under the Equipment loan and the school building loan were finally met. The television production facility moved to its new studio in February, 1972 and it is expected that the new equipment will arrive and be installed by June or July of 1972. Also a large number of Basic Education classrooms should be completed by the end of 1972.

The television production teams went through a six week seminar designed to improve the quality of the programs that were being transmitted. In an attempt to counteract the lack of focus of many classes, the teaching to behavioral objectives was emphasized. However the results of the seminar, and of a reorganization of the hierarchy in the Division of Television Education, will not be seen until 1972.

Finally the way in which children were to be evaluated and promoted underwent drastic revision. A system of oriented promotion was introduced. Almost all students will be promoted. Only in extreme cases will they be required to redo a grade level. Yearly grades no longer will be based on a single final exam as in the past. Now teachers are expected to evaluate their students on a variety of criteria including group work, special projects, class participation and on some accomplishments not traditionally considered academic. Those grades which are given will have almost entirely a diagnostic function.

These changes will be most evident in the early grades of primary education. First grade has often had as many as 40% of its students repeating the grade.

Not surprisingly, a good deal of opposition to oriented promotion

has surfaced among teachers who fear that students will stop studying. However the Ministry has thus far shown itself determined to make the change.

The short range effect of oriented promotion on the numbers of students in seventh, eighth and ninth grades is unlikely to be too great. In the past, most students have dropped out of school before seventh grade for economic reasons rather than because they have failed a particular grade or grades.

Chapter Two

EFFECT OF THE YEAR ON STUDENTS

SEVENTH GRADE RESULTS

The new type of seventh grade students

Seventh grade students in 1971 were different than any students who had entered that grade before. The cost of attending school was cut to a fraction of its former level, and students entered from sectors of society which had never before sent their children beyond sixth grade.

We know that many students came from the villages (cantones) around the towns where schools are located. Traditionally Third Cycle students came only from the towns themselves.

The fathers of these children were less well educated than the fathers of students in earlier years. Only 42% of the seventh grade fathers had completed primary. 51% of eighth grade fathers and 57% of ninth grade fathers had reached that level.

Seventh grade students were poorer than students in eighth and ninth grades. Using television ownership as a yardstick, we found that only 35% of seventh grade homes included a television, while 49% of eighth graders and 51% of ninth graders claimed to have televisions in their homes.

In seventh grade a majority of students were girls (52%); in

eighth grade (54%) and in ninth grade (56%) the majority were boys. Since boys have always done better than girls on our tests, the new seventh grade mix was less favorable to high achievement than previous mixes.

These circumstances ensured that the new seventh grade students would bring to their studies less ability than their predecessors had brought. On the General Ability test their mean of 51.87 was much lower than the 57.84 mean achieved by the 1970 seventh grade. A Reading test mean of 33.04 compares with the 1970 mean of 36.99.

The effect of all these disadvantages can be read from the table of 1970 and 1971 beginning of year scores on the ETS achievement tests. 1971 students started out lower:

TABLE ONE

Seventh Grade ETS Results

	1970	1971
Mathematics	14.82	13.93
Science	20.60	19.00
Social Studies	23.43	21.65

Television/non-television class comparisons

In 1970, television class students did better than their counterparts in the Reform system who studied without television.*

*To review definitions, non-television classes used all elements of the Reform system but television. In other words, they had workbooks, teacher's guides, used the new curricula, and were taught by retrained teachers.

TABLE TWO

Seventh Grade ETS Gain Scores

1970 Results

	TV class	Non-TV class
Mathematics gain	3.84	2.07
Science gain	5.18	2.34
Social Studies gain	7.26	2.67

In all subjects but Mathematics (where differences were non-significant) that result was repeated in 1971.

TABLE THREE

Seventh Grade ETS Gain Scores

1971 Results

	TV class	Non-TV class
Mathematics gain	3.20	3.00
Science gain	4.36	2.83
Social Studies gain	5.78	3.52

Straightforward interpretation of 1971 results is somewhat clouded by the beginning advantage the TV students had over the non-TV students on general ability, and on some socioeconomic status characteristics.

To examine the effects of that general ability and socio-economic status advantage we used the statistical procedure of partial correlations. With that procedure, the relation between any two variables is reduced to the extent that a specified third variable was responsible

for it. In Table 4, the relation between achievement test gain score and being in a television or non-TV class is examined for the effect of general ability, having a television at home, and level of urbanization successively. The results indicate that the major relation declines only slightly when the three controls are instituted. We can thus say with some confidence that having a higher achievement test score (in Science and Social Studies) is the result of being in a television class, and not merely the result of an advantage among TV class students on an extraneous variable.

TABLE FOUR

Correlations Between TV/Non-TV Condition and Achievement Gain Scores, With Partial Correlations

Correlate Pair	Variables Held Constant	Mathematics	Science	Soc. Studies
Gain score by TV/non-TV	none	.01	.12*	.15*
(TV=1; non-TV=0)	general ability	.00	.11*	.14*
	TV in home (0= No TV, 1=TV)	.01	.11*	.15*
	Urbanization (1=urban, 5=rural)	.02	.12*	.14*

*significant at $p < .001$

Although 1971 TV classes did better than non-TV classes in Science and Social Studies, the absolute TV class gain scores were smaller than they were in 1970. To the question of why that occurred,

we suggest two hypotheses, each of which has supporting evidence.

1. Students were less bright in 1971 and could not take the same advantage of the Reform system with television. We know that the general ability scores of seventh graders in 1971 were lower than those of seventh graders in 1970. In addition it is clear that among 1971 seventh graders, achievement was related to general ability. Correlations between general ability exams and end-of-year tests with beginning-of-year test scores held constant are consistently high.

TABLE FIVE

Correlations of General Ability with end-of-year ETS exam, holding beginning-of-year ETS exam constant

	Mathematics	Science	Social Studies
Partial Correlation	.33	.29	.39

We must deduce, then, that if 1971 seventh graders had brought with them more of those skills measured by the General Abilities test their gain scores would have been larger.

2. Between confusion at the beginning of the year and the disruption resulting from the teachers strike it would be expected that 1971 students would learn less than 1970 students. Evidence from several perspectives supports this. Depending on the effects of strike disruption on a given class, the school year for that class could have ended either in October at the normal time, or after a month's extra classes in November. If the teachers and students had attended class

for most of the strike period so that they felt that they had no need to make up for strike-lost time, they ended classes in October. These classes clearly defined themselves as less disrupted by the strike than those classes which opted to continue until November. If gain scores were affected by strike disruption we would expect the October finishers, those less disrupted by the strike, to do somewhat better than the November finishers, all other things being equal.

TABLE SIX

ETS gain scores of October and November finishers

	Math gain	Science gain	Social Studies gain
October Finishers	4.0	4.3	5.9
November Finishers	2.6	3.9	5.1

The comparison strongly favors the October finishers. A tenable counterhypothesis, one that suggests that it is some characteristic of the class which causes it both to work through the strike and do better on achievement exams, cannot be rejected. However, the evidence is consistent with the strike disruption hypothesis, and consistent with the additional supporting evidence that follows.

Another perspective on the possible effect of disruption comes from a comparison of (a) questions on the achievement tests which reflect material taught before the strike with (b) questions reflecting material taught afterwards.

In general we would expect, given equal difficulty of questions, that students would do better on material taught immediately before a test than on material taught several months earlier. In this case, if there had been a normal learning situation, we would expect that material taught before the strike would have been less well remembered than more recently taught material. This is especially true with our testing program since students are not told to review material for the tests, and the exams are given a minimum of two weeks before normal final exams. Thus pre-final studying has not begun.

Our test of this hypothesis compares the percentage gains on questions which reflect material taught before the strike with percentage gains on all exam questions, which reflect material taught both before and after the strike.

TABLE SEVEN

Percentage Gain on
ETS exams (seventh grade)

	Mathematics		Science		Social Studies	
	pre-strike questions	all questions	pre-strike questions	all questions	pre-strike questions	all questions
TV	21%	23%	20%	23%	30%	26%
Non-TV	24%	22%	11%	15%	22%	17%

The data do not confirm the hypothesis that a normal learning situation was in effect. Both pre-strike questions and the whole test reflect similar gain percentages; in social studies, students did better on pre-strike questions: We conclude tentatively that the expected advantage

of remembering material studied recently was more than counterbalanced by the presence of strike and post-strike confusion.

Attitudinal Results

A study of student attitudes toward instructional television also turns up evidence of the effects of the strike and the other disruptions.

Let us compare this year's seventh grade with last year's on three attitude questions:

TABLE EIGHT

Seventh Grade Student Attitudes

Proportion Who Agreed With Statement

A. You learn more during classes with television than during classes without television.

	1970	1971
Beginning of year	79%	73%
End of year	76%	64%
Change	-3%	-9%

B. Classes with television are more difficult.

	1970	1971
Beginning of year	25%	24%
End of year	13%	18%
Change	-12%	-6%

C. It seems that classroom teachers prefer to teach with ITV.

	1970	1971
Beginning of year	72%	62%
End of year	66%	49%
Change	-6%	-13%

Although a majority still think they learn more from ITV than classes without television, it is a sharply reduced majority, both in

comparison with results from the beginning of this year, and with results from 1970.

As in other years, a decline in the number who fear that ITV will be more difficult is evident, but it is a smaller decline than in earlier years.

A major decline in the number of students who see their teachers as favoring ITV, probably reflects the general anti-Ministry feeling which was both cause and effect of the midyear strike. The section on teacher attitudes will consider that in greater depth. It is worth noting that although only 49% of students indicated agreement with this statement at the end of the year, only 7% marked either disagree or strongly disagree. The other 44% marked unsure, the middle point on our five point scale.

Beginning to end of year changes in one other ITV attitude also reflects the year's turbulence. When asked whether their parents were pleased that students were in ITV classes, 76% reported agreement at the beginning of the year, but only 69% did so at the end.

Despite all this ambivalence about ITV, students did make it perfectly clear that given a choice, they would continue with ITV. When asked, "Would you prefer classes in _(subject)_ were taught all by TV, in the same balance as at present, or entirely without ITV?" results are unequivocal (Table Nine).

TABLE NINE

Proportion Who Chose to Eliminate ITV

	Beginning of year	End of year	Change
Math	7%	13%	+6%
Science	5%	8%	+3%
Social Studies	6%	6%	xxx
English	9%	15%	+6%
Spanish	6%	9%	+3%

One apparent anomaly in the 1971 seventh grade data demands further consideration, for on the surface it suggests that the strike may have had worse effects on Television class students than on their non-TV counterparts. 1971 non-TV classes improved more than 1970 non-TV classes despite a sharp General Ability disadvantage (1970=56.3; 1971=47.7). Why should that have occurred when the 1971 TV classes did less well than their 1970 TV classes despite less of a General Ability disadvantage (1970=58.3; 1971=52.7)? (Table Ten).

A simple answer might be that the larger gains for 1971 non-TV classes were a result of improvement in the utilization of new materials (curricula, workbooks, and teachers guides) by teachers now working with them for the second year. That this improvement did not also appear among television classes might be attributed to the shorter periods of teacher/student contact in TV classes, or other characteristics of the TV class/teacher relationship.

TABLE TEN

Percentage Improvement in ETS Scores 1970 and 1971
TV vs. Non-TV

	TV Classes			Non-TV Classes		
	Math	Science	Soc.Studies	Math	Science	Soc.Studies
1970	25.5	25.3	30.9	14.6	11.2	11.0
1971	22.9	23.0	26.4	21.9	15.0	17.2

Nevertheless we would like to raise the possibility that strike disruption bothered the TV classes more than the non-TV classes. The effect of a partially effective teachers strike, when it is over, is to leave classes at varying places in the year's work. Some teachers have covered all of the material of the strike period, some have covered a little of it, and some have covered none of it.

Often televised instruction has been criticized because it is said to be unable to deal with variation in abilities within its audience. That remains to be proven. However when we consider variation in the amount of material covered, the difficulties with televised instruction become clearer. If there are a varying number of uncovered objectives among classes, broadcasters will inevitably bore and/or confuse some part of their audience. If they begin broadcasts from the point when the strike began, despite the fact that some students had attended school and watched later broadcasts, that group of students will be bored. If broadcasts are continued as if students had attended

during the strike, or begin at some intermediate point, there is the risk of confusing students who have not seen the requisite foundation classes. El Salvador chose the latter option, but insisted that students who had missed strike classes stay an additional month for the material they missed. Even here, when all the material is covered, the change in order of topics presented may have caused problems.

In contrast, in non-TV classes, where teachers have complete control over what topics they will present, interclass variation in strike attendance is not a problem. Each teacher can pick up where he left off, or with whatever review his students require because of the layoff.

We would like to stress that we have no evidence beyond logical supposition to support the claim that greater flexibility in the face of disruption helped non-TV class relative to TV classes. The results in Table Ten, although consistent with that claim, are open to other interpretations.

EIGHTH GRADE RESULTS

Comparison of 1970 and 1971 results

1971 eighth grade results are not as encouraging as the seventh grade results just reported. All gains were small--equally so for television and non-television classes.

TABLE ELEVEN

1971 ETS Results, Eighth Grade

	Math		Science		Social Studies	
	TV	Non-TV	TV	Non-TV	TV	Non-TV
Beginning	13.48	13.02	22.00	20.03	22.64	19.78
Ending	15.68	15.15	24.53	23.03	25.61	22.76
Change	+2.20	+2.13	+2.53	+3.00	+2.97	+2.98

These gains are equal to or slightly larger than 1970 gains

TABLE TWELVE

1970 ETS Results, Eighth Grade

	Math		Science		Social Studies	
	TV	Traditional	TV	Traditional	TV	Traditional
Beginning	15.93	15.01	25.07	20.70	25.72	19.83
Ending	18.34	16.42	26.63	23.00	28.63	21.49
Change	+2.41	+1.41	+1.56	+2.30	+2.91	+1.66

However that slight 1971 advantage may be forgotten when we recall that 1970 beginning of year tests were administered in May, after two months of the school year had passed, while 1971 tests were first administered within a couple of weeks from the start of the school year. We would expect that change scores reflecting two months less material would be somewhat smaller.

Two interesting comparisons can be made however.

1) The end-of-year test scores among 1970 eighth graders were somewhat higher than the scores of 1971 eighth graders despite equal gain scores. Since we don't have comparable beginning of year scores, we cannot make a clear statement about what that difference may mean.

Can we assume that, if the 1970 eighth graders had taken their first exams at the beginning of the year, 1970 scores would have been equal to the beginning of year 1971 scores?

If so their real year-long gain would have been larger than those reported in Table 12, and larger than those achieved in 1971 by the eighth grade.

This is not unlikely. A significant section of material had already been covered, when the 1970 first exams were given. Those questions which covered that material were probably more accurately answered at that time than they would have been either on a test at the beginning of the year or even on an end of the year test.

Another possible explanation for the 1970 ETS score advantages would be an assumption that superior ability started 1970 students higher and kept them higher on the tests. We know that General Ability scores are highly related to achievement test scores.

TABLE THIRTEEN

Correlation between General Ability Scores and Beginning of year ETS Scores in 1971

	Correlation
Mathematics	.21
Science	.44
Social Studies	.51

A comparison of 1970 and 1971 General Ability scores demonstrates the significant advantage 1970 eighth graders held on those exams.

	1970	1971
General Ability	74.95	69.30 (sig. $<.001$)

Logically, then some overall advantage on achievement scores would have been expected for 1970 students, even if they had taken first exams as early in the year as did the 1971 eighth graders.

2) We also notice that both in 1970 and in 1971, television classes started out with an advantage over non-TV classes on the beginning of year exams (Table 14). In Science and Social Studies, (1970 and 1971), this advantage was significant at $p < .001$. In Math, 1970 the advantage was smaller but still significant ($p < .01$). In Math, 1971, it was only a trend in favor of television classes.

TABLE FOURTEEN

Ratio of TV Class to Non-TV or
Traditional Classes on ETS Test Scores

Ratio of TV to Traditional Classes	Math	Science	Social Studies
1969 October 7th grade	1.27	1.15	1.20
1970 May 8th grade	1.06	1.21	1.30
Ratio of TV to Non-TV Classes			
1970 October 7th grade	1.16	1.10	1.17
1971 February 8th grade	1.04	1.10	1.14

In interpreting 1970 results we were unsure whether to attribute that TV advantage to carryover from superior TV class performance in seventh grade, or to difference in learning between TV and traditional classes in the period before the 1970 first exams administered in May.

Since we know that 1971 eighth grade first exam differences must be the result of carryover, we can use them as a logical control for interpreting the 1970 results. It seems relatively clear that in Math all the advantage for 1970 TV eighth grade was the result of carryover. In Science and Social Studies, however, it is reasonable to attribute at least part of the difference to pre-exam learning advantages on the part of TV classes.

For both subjects, 1970 eighth grade May exam TV/Traditional ratios surpassed those of preceding year seventh grade October exams. This was not true for 1971's pure carryover results.

This type of re-examination does permit us to say, that if the 1970 May exams had been administered two months earlier, year long gain scores would probably have shown a stronger pro-TV class advantage than they did, especially in Science and Social Studies. This is an important finding and should not be underplayed. It should eliminate some of the ambiguousness of our interpretations in 1970.

However, reporting that television classes did gain better than we had thought they did in 1970, helps to explain neither the smallness of 1971 gains, nor the lack of a TV class advantage in those gain scores.

We seek that explanation in possible effects of the strike and in program quality.

1) Did the strike and other disruptions have an effect? The answer seems unquestionably yes. Several types of evidence support this.

In Mathematics and Social Studies there was a significant relationship between gain scores and the date end-of-year tests were administered.

TABLE FIFTEEN

ETS Gain Scores of October and November Finishers

	Math Gain	Science Gain	Social Stud. Gain
October test takers	2.77	2.31	4.38
November test takers	1.95	2.40	2.12

October end of year tests were administered in classes which declared that they had met regularly enough throughout the teachers strike so that they did not need to continue in session through November to make up for lost time. The October test takers thus defined themselves as less disrupted by the strike than the November test takers who felt they needed to make up for lost time.

The fact that as a group, the October test takers show significantly higher gain scores in Mathematics and Social Studies than do November test takers, may be taken as evidence for the negative effects of the strike on learning.

Since fewer than one quarter of our sampled eighth graders were in the October test group, the depressing effect of the strike was emphasized in our total mean scores. Superior seventh grade performance may be in part related to the larger percentage of seventh grade students (40%) who finished the year normally in October.

While we do see the October test takers as less affected by the strike than November test takers, that is not to say that they were unaffected by it. Of the 43 schools in our sample, no more than five

approached normal functioning during the strike.

An analysis comparing test questions dealing with material taught before the strike, and test questions dealing with the year's material yields more information about strike effects.

We suggested above that, in a normal situation, questions reflecting the end of year material should be answered better than questions reflecting material taught earlier when tested at the end of year. More of the early material would be forgotten.

TABLE SIXTEEN

Percentage Gains on Pre-Strike Items and on Whole Test

	Math		Science		Social Studies	
	pre-strike	whole test	pre-strike	whole test	pre-strike	whole test
TV	15%	16%	16%	12%	12%	13%
Non-TV	22%	16%	13%	15%	13%	15%

As Table 16 shows, however, percentage gains on pre-strike questions and on the whole tests are quite similar. The "natural" pro-whole-test advantage is not found. Our conclusion is that the positive effects of recency are more than counterbalanced by the negative effect of the strike and its aftermath on end of year learning.

Effects on Attitudes

Student attitudes about ITV also show the importance of strike

disruption and the difficulties in the early part of the year.

When asked if they learned more from classes with TV than without it students responded considerable less favorably in October than they had in March.

TABLE SEVENTEEN

Proportion of Agreement with the Statement
"You learn more during classes with television
than during classes without it"

	8th grade 1971	7th grade 1970	8th grade 1970
Beginning of Year	71%	79%	78%
End of Year	62%	76%	73%
Change	-9%	-3%	-5%

This is a larger drop than this group had as seventh graders, and than the preceding eighth grade group showed.

Similarly, students reported sharply less favorable teachers' attitudes than they had reported at the beginning of the year.

TABLE EIGHTEEN

Proportion of Agreement with the Statement
"It seems that classroom teachers prefer to teach with television"

	8th grade	7th grade	8th grade
	1971	1970	1970
Beginning of Year	57%	72%	67%
End of Year	44%	66%	65%
Change	-13%	-6%	-2%

Neither their own seventh grade response, nor the preceding eighth grade's response showed a similar drop.

A significant drop in the number of students who reported positive parent attitudes about ITV (78% in February, 67% in October) indicates that the effects of the strike passed beyond the confines of the school building.

Why did the eighth grade do more poorly than the seventh?

Even if we accept the notion that strike disruption depressed eighth grade gain scores, we still must consider why that effect was more apparent in the eighth grade than in the seventh.

In 1970, all seventh grade classes were under the reform system. Although some functioned without television, either for the purposes of evaluation or for other reasons, all worked with the new curricula, workbooks, teacher's guides and retrained teachers. This meant that teachers had a year's practice under the new system before the

disruptions of 1971. For eighth grade in 1970 only 32 classes in the entire system were under the Reform. Not until 1971 did all the Reform elements come into effect in eighth grade. This meant that not only did teachers have to deal with the disruptions, but they had to deal with them while working with new curricula and adjusting to new ways of teaching.

It might be hypothesized that continued satisfactory achievement in seventh grade despite the disruptions was the result of the teachers' full-year experience with the reform system, while the lack of that experience in eighth grade influenced the poorer achievement in that grade.

In last year's report we suggested that part of the eighth grade problem was in the quality of the TV classes themselves. The production teams recognized that same problem and committed themselves to retaping 80% of the 1970 programs for broadcast in 1971. Now we must consider how much they have improved. We have no objective criteria for judging other than unsatisfactory performance on the achievement tests. However we did ask a sample of teachers their opinions of various aspects of individual television series. (See full results in section on teachers' attitudes.) We compare overall rankings of the ten seventh and eighth grade series in 1970 and 1971.

Overall Series Rankings

1970	1971
1. Mathematics 7	English 7
2. Social Studies 7	Spanish 8
3. Spanish 7	Mathematics 7
4. English 8	Spanish 7
5. English 7	Social Studies 7
6. Mathematics 8	Social Studies 8
7. Spanish 8	English 8 (tied)
8. Science 7	Science 8 (tied)
9. Science 8	Mathematics 8 (tied)
10. Social Studies 8	Science 7

There is improvement in the position of the Social Studies eighth grade series, and slight improvement in the position of the Science eighth grade series. Mathematics eighth grade loses some ground. Still, none of these three series have reached the top five in overall rated quality.

This confirmed the opinion reached by a committee of television production chiefs, AID advisors and Evaluation personnel who observed a small sample of programs about midway through the year. They felt that there had been some improvement in quality over the 1970 level, but major improvements remained to be made.

The general opinion that there was much room for improvement not only for the eighth grade, but at all grade levels, led to the production center seminar described in the chronological record section.

A footnote on eighth grade experimental comparison

Our experimental observation of twelve classes in six schools (one TV class, one Control class in each school with students randomly assigned) showed no significant differences in any subject. Considering the overall poor performance in eighth grade, this should not be surprising.

NINTH GRADE RESULTS

In seventh grade, television classes learned better than non-TV classes; in eighth grade no one learned very much or better than anyone else. In ninth grade a different pattern appears.

TABLE NINETEEN

Ninth Grade ETS Results, 1971

	Mathematics		Science		Social Studies	
	TV	Trad.	TV	Trad.	TV	Trad.
Beginning of year	15.58	15.25	21.31	17.86	20.53	18.35
End of year	18.16	15.42	23.21	19.65	21.55	21.45
Change	+2.57	+ .17	+1.90	+1.79	+1.02	+3.10

In Mathematics, television classes clearly did better; traditional classes learned virtually none of the tested material. However the interpretation of those results is not simple.

The traditional classes in ninth grade unlike the non-TV classes of seventh and eighth grades, were representative of the old system. Their students had no workbooks, the teachers had no teacher's guides, and most important of all, teachers continued to teach from the old curricula. The only Reform advantage traditional classes enjoyed was the presence of a large number of retrained teachers in most classrooms.

The achievement tests were designed from the Reform curricula. It is then legitimate to question whether any advantage of Reform system classes over traditional classes is the result not of superior learning, but of the tailoring of the test to the Reform curricula. Two years ago we considered that problem in depth. Then we examined only those questions covering material common to both Reform and traditional curricula. Surprisingly enough, Reform system classes advantage over traditional system classes on the common questions was approximately the same as it was on the entire tests. (See Complete Report of the First Year of Research). The problem of Reform tailored tests seemed to demand only minimum attention.

Nevertheless, it is possible that some test design advantage did accrue to Reform classes in ninth grade Math 1971. For at least a few questions, response depended on a knowledge of the vocabulary of Modern Mathematics, which the traditional curriculum did not cover.

This traditional disadvantage may have been mitigated to some extent by the presence of retrained teachers in almost all classrooms, traditional and Reform. Since retraining included content review as well as teaching methods, all teachers were familiar with Modern Math. We may suspect that teachers introduced this new perspective even into the traditional classes.

In conclusion, we remain suspicious of the magnitude of the Reform/Traditional differences in Mathematics, but are unable to support that doubt with quantitative evidence.

In Science, change scores are quite small, with Reform classes

retaining their eighth grade carryover advantage into ninth grade end-of-year test results.

TABLE TWENTY

Reform/Traditional Test Score Ratio
on Science ETS Exams

October 1970	February 1971	Oct./Nov. 1971
8th grade	9th grade	9th grade
1.29	1.19	1.18

In Social Studies, the advantage in gain scores was clearly in favor of the traditional classes. A small carryover TV advantage was completely erased.

TABLE TWENTY-ONE

Reform/Traditional Test Score Ratio
on Social Studies ETS Exams

October 1970	February 1971	Oct./Nov. 1971
8th grade	9th grade	9th grade
1.33	1.12	1.00

This is a somewhat misleading finding. In ninth grade, all television broadcasts stopped shortly after the strike began, and did not resume for the rest of the year. This leaves our comparisons somewhat shaky, especially since less than 40% of all the material on the

Social Studies achievement test had been covered before the strike. Thus our full-year comparisons are not between Reform system and traditional system. On one side we have Reform with television for less than 40% of the test, and a strike-disorganized Reform system without television for the rest of the test. On the other side we have a traditional system for the whole year working with retrained teachers.

If we examine only those questions covering material taught before the strike, we have too few questions to find significant differences. However the same pro-traditional trend as for the whole test does appear.

In general, year-long gain scores, whether pro-Reform as in Math, pro-traditional as in Social Studies, or neutral as in Science, are small.

TABLE TWENTY-TWO

Ninth Grade
Percentage Gain Scores-Whole Test, 1971

	Mathematics	Science	Social Studies
Reform	17%	9%	5%
Traditional	1%	10%	17%

Only in Science is there significant improvement when questions on pre-strike material are separately examined.

TABLE TWENTY-THREE

Ninth Grade
Percentage Gain Scores-Pre-Strike Questions, 1971

	Mathematics	Science	Social Studies
Reform	13%	20%	6%
Traditional	3%	17%	18%

If we assume that the level of pre-strike learning would have continued throughout the year if it weren't for the strike, Science gain scores might have at least reached the level of seventh grade Science gain scores. Clearly the strike had its effect on these results.

Mathematics and Social Studies showed no pre-strike question advantage. For those series we must consider not only the effects of the strike, but also seek additional explanation for students' poor learning.

As before, we look first to the disruption caused by the strike. Considering that ninth grade televised classes were stopped by the strike and not renewed, it might well be argued that ninth graders in television classes were the group most affected by the strike.

Let us look at the same type of evidence for disruption effects as in the sections dealing with seventh and eighth grades.

Comparing pre-strike items and whole-test percentage gain scores a normal learning situation should show high, short term memory influenced, whole test gains (Tables 22 and 23). That this was not so

in Social Studies and strongly not so in Science, is an indication of the negative effects of the strike. That more post-strike than pre-strike learning is reflected on the Mathematics test, suggests that the ending of televised classes was less harmful in that subject than in the other two.

The effect of having stayed in school during the strike as opposed to staying out of school and returning to stay one additional month can be measured by comparing the gain scores of those who finished the year in October and those who finished in November. We have suggested that the former group defined themselves as less affected by the strike than the latter.

In ninth grade this comparison provides less consistent results than were obtained in the seventh and eighth grade comparisons (Table 24). In Social Studies, the advantage of the October finishers over November finishers followed the lower grade pattern.

TABLE TWENTY-FOUR

Gain Scores on ETS Tests by Test Date

	Mathematics		Science		Social Studies	
	Oct.	Nov.	Oct.	Nov.	Oct.	Nov.
Reform	1.67	3.62	1.81	2.03	1.80	.09
Traditional	.04	.21	2.04	1.71	4.96	2.44

In Science October and November finishers did equally well. In Mathematics, however, there was a clear advantage to the November

finishers. Apparently, those who stopped classes for the strike and then started up again were better off than those who worked through. Examining only the Reform classes, we suspect that televised classes were not working well enough so that students were hurt by their disruption and non-resumption. To back this up we have the evidence of classroom teachers who claimed that students learned less from ninth grade Math broadcasts than from any other series in any other grade. We asked them to rate how well students were learning Mathematics from the ITV lessons. The mean response score of 56 on a scale running from 20 to 100, was seven points below the next lowest of the 15 series and 13 points below the fifteen series mean. Throughout the year ninth grade Mathematics classroom teachers complained to visiting researchers that their students were lost watching the televised classes.

It might be added here that on our index of teacher course ratings (see Teacher attitude section) the ninth grade Science, Mathematics and Social Studies series ranked in the last four of the fifteen series. Although the series were made by experienced production teams (the former seventh grade teams, usually) the fact that this was the first year for the taping of the programs was clearly damaging. There can be little doubt that less than satisfactory television class quality was an influence in the small ninth grade gains.

This unsatisfactory program quality as well as the strike disruptions were also reflected in a sharp downturn in students' positive attitudes toward ITV.

TABLE TWENTY-FIVE

Student Attitudes
Proportion Who Agree With The Statement

Statement	1970 (8th grade) Beg.	End	Change	1971 (9th grade) Beg.	End	Change
You learn more during classes with television than without	78%	73%	-5%	82%	71%	-11%
Classes with television are more difficult	16%	11%	-5%	10%	16%	+6%
It seems that classroom teachers prefer to teach with television	67%	65%	-2%	57%	45%	-12%
After TV broadcasts there isn't sufficient opportunity to ask questions or give opinions	(not asked)			32%	44%	+12%
My parents are pleased that I receive classes by television	(not asked)			72%	57%	-15%

At the beginning of 1971, students were optimistic about how much they could learn from ITV. They had forgotten their doubts of the preceding October. Only one in ten thought TV classes were harder than non-TV classes. That optimism was not fulfilled. By the end of the year only 71% of all students believed that they learned more with

television than if there had been no television. These students, after three years of experimental ITV classes, had more doubts about the usefulness of these classes than they ever had before.

Only 45% of all students reported that their teachers preferred to teach with television at the end of 1971. This represents a drop of twenty percentage points from October 1970, and indicates that the resentments teachers felt because of the strike were clear enough to students.

Parents, like teachers, were reported to be a good deal more hesitant about ITV at the end of the year than at the beginning of the year.

We suspect that much of this increased negative feeling is generalized from problems with the Mathematics course. When asked whether they wished to end ITV classes, continue with them as at present balanced with classroom instruction, or receive all instruction with television, students responded differently for Math than for any other subject.

TABLE TWENTY-SIX

Proportion Who Wished to End ITV Classes Entirely

Subject	Beginning	End	Change
Mathematics	5%	22%	+17%
Science	1%	3%	+ 2%
Social Studies	1%	7%	+ 6%
English	4%	7%	+ 3%
Spanish	3%	10%	+ 7%

A slightly larger number of students were ready to end television classes in each of the four other subjects at the end than at the beginning of the year. Mathematics was the only one to be rejected by more than 10% of the students, and it was rejected by 22%, an increase by a ratio of 3.5 during the year.

Chapter 3

EFFECT ON TEACHERS

Perhaps more unmistakeably than on any other measure, the imprint of the strike is evident on the 1971 teachers' attitude questionnaire.

For the third year, we questioned teachers about attitudes toward ITV. For the second year we asked for their attitudes about education and the teaching profession, toward specific problems in the schools, and toward each television series. Never have their attitudes been so negative.

They liked ITV in general and almost all individual series less than they did in 1970 or 1969. The teaching profession fared worse in their eyes. Specific school problems loomed larger.

Was the educational system in that much poorer shape? Had quality deteriorated as much as these results suggest? We are not sure but we doubt it.

Unfortunately all the teacher's questionnaires were administered at the end of the school year between six and eight weeks after the strike. The great bitterness toward the Ministry and all its works had not dissipated. Teachers were much more ready to be critical than ever before. In addition, school problems were salient. Throughout the strike teacher leaders had emphasized not only the poor

economic situation of the teachers, but also poor conditions in the educational system in which they taught. Often ITV was accused of robbing funds that might have been used to raise teachers' salaries and provide additional teaching materials.

We cannot say whether the attitudes reported here are temporarily depressed, whether they can be expected to bounce back as strike memories fade, or whether they are a permanent feature of the El Salvador educational landscape. If the second is true, and attitudes do predict behavior, the cooperation of teachers which has been essential in the success of the educational reform may become more difficult to arrange for future innovations.

Attitudes toward ITV

Graph 1 describes teachers' attitudes toward ITV for the three years 1969, 1970 and 1971.

Fewer teachers in 1971 than in 1970 thought that students learn more by television than by teaching without television (70% agreement in 1970, 59% agreement in 1971). Conversely, more teachers (21% in 1971, 10% in 1970) thought students would learn more if they did not have television in class. Still 63% felt that television did have a place in the classroom, despite all the anti-ITV propaganda. Although less so than in 1970, this remains an encouraging finding.

Continuing with negative views of ITV, more teachers thought a) it was harder to maintain discipline in ITV classes (14% in 1970, 24% in 1971), b) that TV classes hindered the personal relations

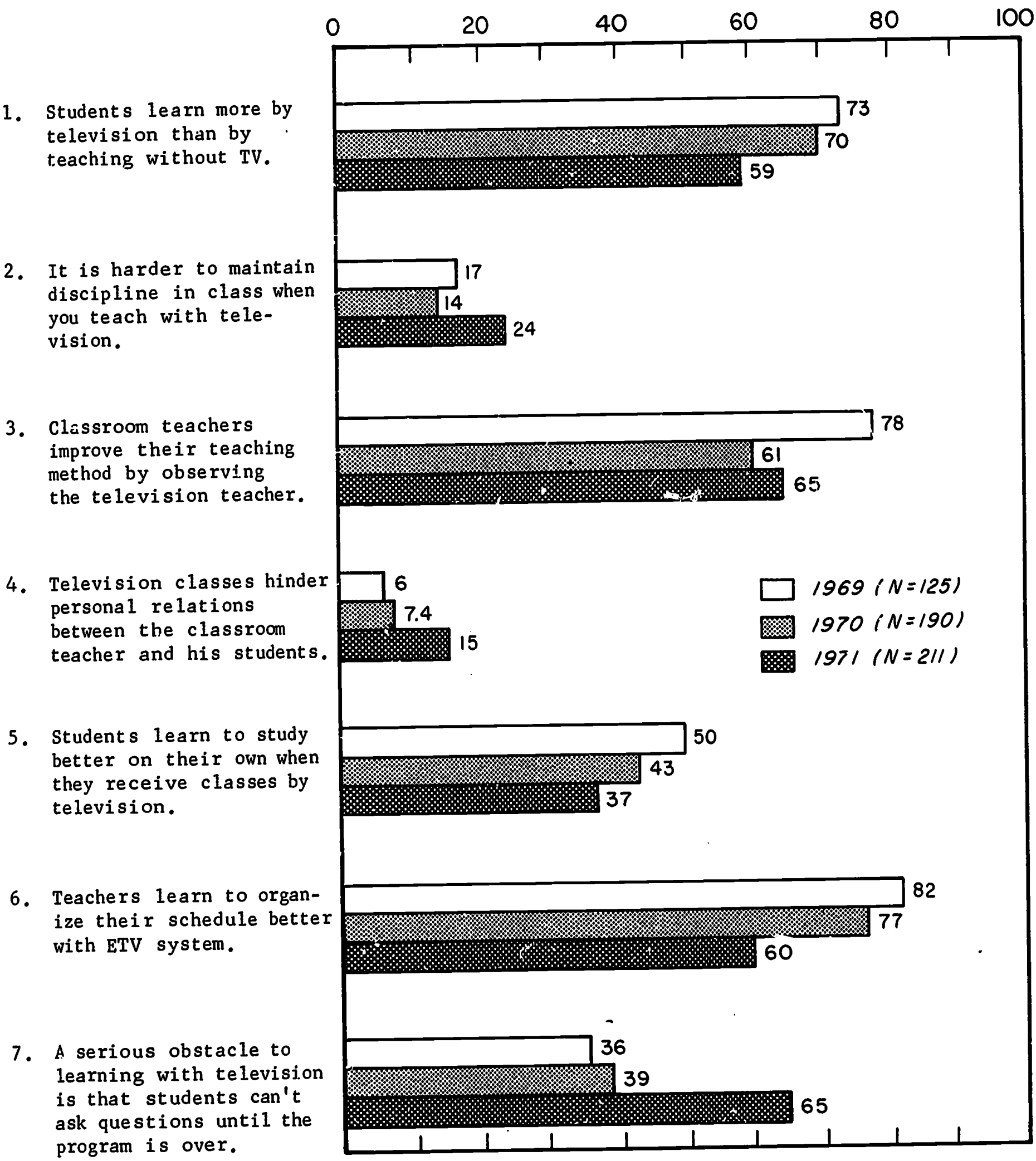
between teacher and student (7% in 1970, 15% in 1971), and c) that a major problem of TV teaching was the inability of students to ask questions until the teleclasses were over (39% in 1970, 65% in 1971).

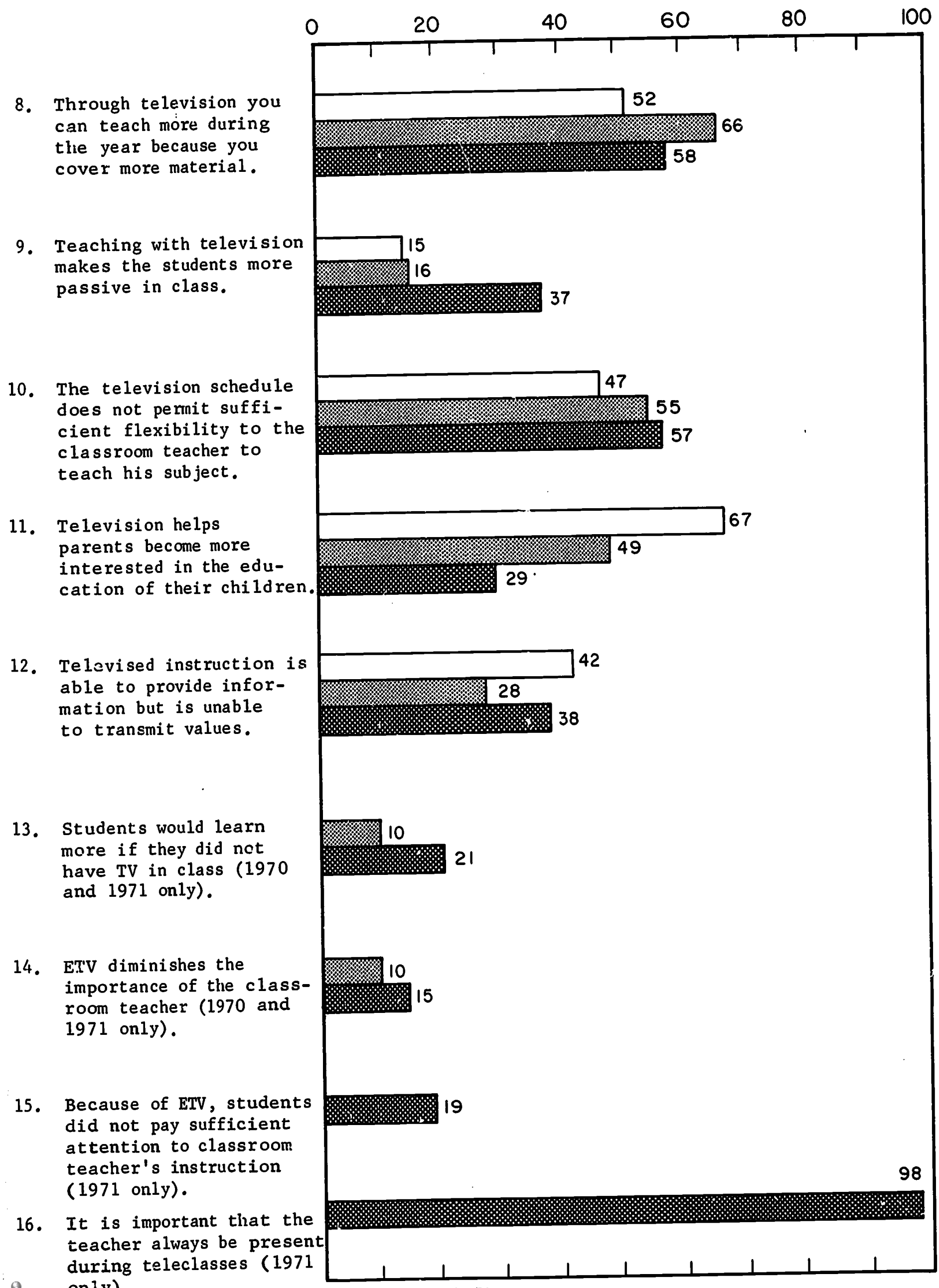
In 1971, 37% of classroom teachers felt that "teaching with television makes students more passive in class." Only 15% and 16% felt that way in 1969 and 1970, respectively. This attitude was most often expressed by city teachers (51% agreed) and by younger teachers (53% of those under 26, 41% of those between 26 and 35.)

A sharp drop in the number of classroom teachers who agreed that "television helps parents become more interested in the education of their children" continued a trend already evident in comparing 1970 with 1969 results. In the course of two years, a 40 percentage point drop has appeared. That this reflects progressive disillusionment cannot be doubted. Teachers with two or three years experience in ITV classes are the most pessimistic about parents' involvement. Only 22% of this group agreed that ITV stimulates that interest. In contrast, 38% of the teachers with no ITV experience and 37% of those who were teaching for the first time with ITV perceived ITV as a stimulant.

On two questions, 1971 results broke this "worse than ever before" pattern. A sharp decline from 1969 to 1970 in agreement with the statement "Classroom teachers improve their teaching methods by observing the television teacher" (1969 agreement was 78%, 1970 agreement 61%) was partly reversed in 1971 (65% agreed in 1971). Agreement with this attitude was most often reported by rural teachers (79%) younger

Comparison of Classroom Teacher Attitudes Toward ETV: 1969, 1970 and 1971
Percentage Agreement with Statements About ETV




0
20
40
60
80
100
8. Through television you can teach more during the year because you cover more material.
52
66
58
9. Teaching with television makes the students more passive in class.
15
16
37
10. The television schedule does not permit sufficient flexibility to the classroom teacher to teach his subject.
47
55
57
11. Television helps parents become more interested in the education of their children.
67
49
29
12. Televised instruction is able to provide information but is unable to transmit values.
42
28
38
13. Students would learn more if they did not have TV in class (1970 and 1971 only).
10
21
14. ETV diminishes the importance of the classroom teacher (1970 and 1971 only).
10
15
15. Because of ETV, students did not pay sufficient attention to classroom teacher's instruction (1971 only).
19
16. It is important that the teacher always be present during teleclasses (1971 only).
98

teachers (79% of those under 26) and teachers with the least ITV experience (75% of those in their first year, 45% of those in their third year). This response, breaking the normal anti-ITV pattern, suggests some improvement in ITV classes since last year. However the fact that the teachers with the most experience with ITV were the least positive, suggests that the improvement has not kept pace with teachers' increasing confidence in their own abilities. As teachers gain familiarity with the ITV system, they are less willing to give automatic respect to teleteachers.

A second surprising finding, concerned the decreasing criticism of ITV represented by agreement with the statement "Televised instruction is able to provide information, but is unable to transmit values." That the teaching of values is highly regarded may be seen from the 74% of these teachers who agreed that "The fundamental goal of education is the formation of a child's character" (Table 27). In 1971, only 38% of all teachers believed that ITV was unable to transmit values, comparing favorably with the 42% who believed it in 1969 and the 52% who believed it in 1970.

Attitudes about teaching and education

The status of teaching as a desirable profession suffered in the aftermath of the strike (Table 27). 27% of all teachers agreed that teaching did not give much satisfaction. Only 3% felt that way in 1970. In 1971 only 13% said they would encourage their best students to become teachers; 20% had agreed that they would in 1970. The same

small proportion, 13%, believed in 1971 that teachers were highly respected in El Salvador. The already low 18% agreement with this statement in 1970 was further undermined by hostile reaction to striking teachers by parents and others. While in 1970, 45% of all teachers said they would stay in teaching even though offered a better paying job, far fewer (33%) were still saying that at the end of 1971.

As noted in the history of the year, Chapter 2, the system rapidly expanded this year. 35% more students had to be incorporated in seventh, eighth and ninth grades. Despite this, almost everyone (97%) thought that all students should have the right to finish ninth grade. Only a few (8% in 1971, 4% in 1970) thought that right should be limited to the best primary school graduates. However this continuing belief in the right of all to this level of education did not stop a change in teachers' perceptions of their students. In 1970, 36% believed that the increase in enrollment would mean a decrease in the quality of secondary education. By 1971, 55% shared that belief. In 1970 71% of all teachers accepted the statement that "the great majority of students are motivated to take advantage of their education in Plan Basico." Only 47% still thought so after 1971 and its increased enrollment.

Teachers are not blind to the effects of opening Plan Basico to a broader population; nonetheless, almost to a man, they still favor the expansion.

Perhaps the most surprising finding of all the attitude results, concerns response to the statement "The Educational Reform is leading

TABLE TWENTY-SEVEN

Teacher Agreement With Statements About Teaching and Education in El Salvador: 1970, 1971

Statements	Classroom Teachers (1970 N=190	Classroom Teachers (1971) N=213
1. Teaching is not a profession that gives much satisfaction.	18%	27%
2. All young people ought to have the opportunity to finish Plan Basico.	98%	97%
3. The increase in enrollment decreases the quality of secondary education.	36%	55%
4. The fundamental goal of education is the formation of a child's character.	71%	74%
5. I would encourage my best students to become teachers.	20%	13%
6. Only the best students should study beyond primary.	4%	8%
7. Teachers are highly respected in El Salvador.	18%	13%
8. The majority of Plan Basico students are not very interested in learning.	29%	33%
9. I would stay in teaching even if I were offered a better paying job.	45%	33%
10. Many students lack respect for their teachers.	48%	43%
11. The most important goal of education is the development of reasoning ability.	68%	72%
12. The great majority of students are motivated to take advantage of their education in Plan Basico.	71%	47%
13. The Educational Reform is leading toward a high quality of education in the Plan Basico.	48%	53%

toward a high quality of education in the Plan Basico." In 1970 48% agreed. Considering the strike, and all the bitterness, and all the negative attitudes we report above, it seemed a foregone conclusion that response in 1971 would be less positive. No decrease occurred. In fact, positive response to this statement, which seeks a summing up of all the Educational Reform has done, increased slightly to 53% agreement. The majority of teachers were saying that although there are many things they object to, they still believe that the Educational Reform, taken as a whole, is on the road to creating a system of high quality education.

Specific problems of the educational system

In the final section of the teacher's questionnaire, we listed a series of problems which had been seen as important in earlier years. The design of the listing permitted teachers to specify which problems they thought were "very serious," "serious," "not too serious" and "not at all serious."

Although the results are quite similar to 1970 results (Table 28) some interesting differences do appear. For ten of the twelve problems listed, more teachers thought them very serious in 1971 than had thought that the previous year. This conforms to the general pattern of heightened criticalness.

Only for the statement suggesting a "shortage of teachers with a (true) vocation for teaching" was there a decline. We might hypothesize that the severity of the attack from the government and from parents

during the strike had welded stronger intra-group loyalty and respect among teachers.

There was no change in the number of teachers who saw "lack of supervision" as a very serious problem. However, recalling that in 1970 supervisors were still in training and almost never in the schools, the 91% who did not see "lack of supervision" in 1970 as a serious problem seemed to be saying not that supervision was satisfactory, but rather that the lack of it was not a very serious problem. We then cannot say whether the same response in 1971 meant that supervision in that year was satisfactory, or whether it made no difference whether it was satisfactory or not, its lack would not have been seen as a very serious problem in any case.

Despite the salary raises that resulted from the strike, no fewer respondents saw the "financial position of teachers" as a very serious problem. The 55% who declared it a very serious problem in 1971 ranked it as the number one problem for the second year in a row. Clearly the salary dissatisfaction felt by most teachers was not resolved in 1971.

Several other problems were considered much more serious in 1971 than they were in 1970. 39% in 1971 as opposed to 26% in 1970 saw the presence of "too many students in class" as a very serious problem. The rapid increase in the number of students in the Third Cycle in 1971, and the very difficult adjustments that had to be made in the beginning of the year in response, were influential. With teachers teaching double sessions and almost every classroom filled to capacity, a sense that too

TABLE TWENTY-EIGHT

Problems With Teaching and With The Educational System
Percentage of Classroom Teachers Saying
That Problem is "Very Serious"

Problems	Percentage	
	1970	1971
1. The financial position of teachers.	54	55
2. The poverty of students and their surroundings.	45	49
3. Shortage of teachers with a "vocation for teaching."	34	29
4. Lack of teaching material.	34	43
5. Lack of cooperation from parents.	27	32
6. Too many students in class.	26	39
7. The efficiency of the Ministry of Education.	22	27
8. The method for assigning teachers to schools.	21	35
9. The guides and workbooks do not arrive on time.	14	29
10. Administration within the schools.	11	14
11. Lack of supervision.	10	9
12. Technical failures in the reception of the teleclasses.	8	15
13. Student behavior.		9

many students are in class is a natural one.

A second sharp rise, in the number who saw as very serious "the method for assigning teachers to schools" probably stems from the strike aftermath. As we mentioned in the history of the year, after the strike, parents in some communities refused to let striking teachers return to local schools. To placate the parents, the Ministry shifted teachers from one location to another. Not surprisingly, many teachers who were uprooted in this fashion, and frequently forced to commute longer distances to their homes, were unhappy with the situation.

More than twice as many teachers in 1971 (29%) than in 1970 (14%) saw the late arrival of guides and workbooks as a serious problem. The printing and distribution of guides and workbooks was shifted from the government's own printing shop to that of a private company. Distributions were made about once every six weeks, rather than each week as before. Combinations of delays in preparation of materials, in printing of materials, and because of strike related difficulties, meant that television classes of a particular course unit often already had begun before teachers had the related guides or students the related workbooks.

An increase in the proportion of teachers who saw the "lack of teaching materials" as a very serious issue (34% in 1970, 43% in 1971) may be related to the increased salience of this issue as a result of the strike. We mentioned before that ANDES leaders criticized ITV claiming that investment made in it left the teachers without needed in-class teaching materials.

"Technical failures in the reception of teleclasses" also was perceived as very serious by more teachers in 1971 than in 1970. Although the 15% who responded this way make this among the least serious problems, the seven percentage point increase over 1970 response, and the similar response of students as described above, make it worth noting. As the system expands (sometime in 1972 all students in seventh, eighth and ninth grades will have TV classes) the maintenance of all sets requires increasingly careful organization. In 1971, part of the problem of increasing numbers of technical failures can be attributed to the complete lack of replacement sets. With the purchase of extra sets with AID loan funds in 1972, and good supervision of their maintenance, technical problems should be much less serious.

Attitudes towards television series

In addition to the general attitude questionnaire, we also administered a special questionnaire designed to tap attitudes toward individual television series. About 20 television classroom teachers rated each of the 15 series (English, Spanish, Mathematics, Science and Social Studies in each of seventh, eighth and ninth grades) on sixteen criteria.

Raters were presented with neutrally worded phrases that incorporated the criteria we wished to consider (i.e., "Student learning from the Mathematics ninth grade series.")

On four of the criteria (number of exercises in student workbooks, amount of content in teleclasses, amount of exposition by

teleteacher, and quantity of visual aids) ratings were made on a five point scale which ran from "very insufficient" to "very excessive," with "adequate" as its midpoint. On all of these criteria, there was little variation among teleclasses, and response centered quite closely on the midpoint, or "adequate."

On one criterion, teachers were asked to rate the teleteacher's teaching ability in comparison to that of the majority of classroom teachers. In the cases of Science eighth and Science ninth grades, the advantage of the teleteacher over his classroom counterparts was seen as slight. In English seventh and English ninth the teleteacher was rated much superior. In the other series the teleteacher's advantage was clear, but not overwhelming. In general, these ratings conformed to the overall pattern we report below for each teleseries. The eleven remaining criteria can be grouped under five general categories.

A. Student reaction to teleseries.

1. Students' learning from ITV
2. Student motivation since the introduction of ITV

B. Value of teaching guides.

3. The help teaching guides give to your teaching.
4. The practical value of the activities recommended by the guides.
5. The relation between the teaching guides and the teleclasses.

C. The teleteacher.

6. The teleteacher's mastery of the subject matter.
7. The teaching ability of the teleteacher.
8. The teleteacher's ability to encourage student participation.

D. The quality of visual aids.

9. Legibility of graphic material
10. The contribution of film and graphic aids.

E. Summary attitudes.

11. The help that ITV has given in the instruction of the subject matter.

An unlabeled 1-5 interval scale, with 5 signifying the highest possible rating, was used to record teachers' opinions on these eleven criteria. Average scores for each teleseries were calculated taking the mean for all of the eleven criteria. For additional clarity, these scores were recoded onto a scale of 20-100, simply by multiplying each by 20. The rescaled scores are reported in Table 29.

TABLE TWENTY-NINE

Classroom Teacher Ratings of the Teleseries:
Average Ratings on Eleven Criteria

	Subject	Grade	1971	(No. of resp.)	1970
1.	English	7	84.6	(25)	80.2
2.	English	9	79.2	(21)	----
3.	Spanish	8	78.0	(17)	76.5
4.	Spanish	9	76.8	(22)	---
5.	Mathematics	7	76.6	(26)	83.1
6.	Spanish	7	76.2	(23)	82.7
7.	Social Studies	7	75.8	(25)	83.0
8.	Social Studies	8	74.0	(18)	72.9
9.	English	8	73.5	(20)	80.5
10.	Mathematics	8	73.5	(18)	77.5
11.	Science	8	73.5	(20)	73.0
12.	Social Studies	9	72.5	(23)	---
13.	Mathematics	9	70.8	(19)	---
14.	Science	7	69.7	(24)	75.9
15.	Science	9	69.1	(21)	---

Several conclusions can be drawn.

Overall, ratings are lower than those of 1970. We attribute this to heightened criticalness, whether strike induced, or because teachers felt more confident of their own abilities, rather than to any deterioration of series quality. In seventh grade, with the exception of the English teleseries, the production teams retaped no more than 20% of their programs. Yet each of the four series suffered a sharp decline. Clearly raters were tougher in 1971.

English seventh grade improved impressively. In 1970, the seventh grade English series was rated mediocrely; it ranked fifth of the ten series. In 1971 it moved to first among fifteen, fully five points ahead of any other series. In 1970 the last part of the course was taped by a different and less experienced teleteacher than Professor Mayorga who did the majority of the course. In 1971, Mayorga returned and retaped the latter part of the course making the series a continuous whole. It made a great deal of difference.

The eighth grade series showed improvement. Despite the general negative trend, three eighth grade series, Spanish, Social Studies and Science held their own or improved their average scores. The eighth grade production teams retaped about 80% of their programs. Apparently it helped. Still, on the average, seventh grade classes were seen as superior to eighth grade classes. Although average eighth grade scores were superior to those of the newly made ninth grade series, two ninth grade series, English and Spanish, were rated among the top four series. Only Spanish eighth grade was among the first seven rated courses.

Chapter 4

PROMOTION RATES: EFFECTS OF THE REFORM

Analysis of promotion statistics for the three years for which reliable data is available offers us some interesting, if not entirely unambiguous trends.

TABLE THIRTY

Promotion Rates 1968-1970

Year	Grade	Initial Matriculation	Number Promoted	Percent Promoted	Condition
1968	7	7,500	4,800	64%	Traditional
1969	7	11,400	7,400	65%	32 Reform classes Rest Traditional
1970	7	11,900	9,600	81%	All Reform
1968	8	5,900	4,100	69%	Traditional
1969	8	7,400	5,200	70%	Traditional
1970	8	9,500	7,300	77%	32 Reform classes Rest Traditional
1968	9	4,800	4,000	83%	Traditional
1969	9	6,200	4,700	76%	Traditional
1970	9	6,600	5,400	82%	Traditional

Seventh grade. In 1968, before any element of the Reform was introduced, 64% of all students were promoted. In 1969, when only 32 classes

(about 1200 students) were under the Reform aegis, an insignificant increase to 65% was registered. However the fact that there was no drop in promotion despite a 52% increase in matriculation is in itself an encouraging finding. In 1970, as the Reform spread throughout all seventh grade classes, the promotion rate jumped to 81%.

Eighth grade. In 1968 and 1969 the eighth grade was unaffected by the Reform. Promotion rates were 69% and 70% respectively. In 1970, when the 32 experimental Reform classes entered eighth grade (now a larger proportion of total matriculation) the promotion rate jumped to 77%.

Ninth grade. Ninth grade classes remained under the traditional system for all three years we have considered. No consistent trend was registered; a 1968 to 1969 drop in proportion promoted was reversed by a 1969 increase.

What can we conclude?

The data are certainly consistent with a hypothesis of positive effect for the introduction of the Educational Reform. In seventh and eighth grades, as the Reform was introduced and extended, the proportion of students who passed and continued normally into the following grade increased.

Unfortunately there are counterhypotheses which may fit the data. As the Reform was introduced, grading standards may have been eased up. It is true that many new teachers entered the Third Cycle to handle the large influx of students. Since these teachers were generally promoted from primary schools, it might be expected that their

standards for promotion were less rigorous than the standards of veteran Third Cycle teachers.

However the fact that among ninth graders no increasing trend can be noted, does argue against accepting the counterhypothesis. After all, although most elements of the Reform (new curricula, workbooks, teacher's guides and television) were introduced grade by grade, new and retrained teachers in most schools were not restricted to teaching only Reform classes. More often than not, they would teach their specialty at all grade levels. Thus a hypothesis of lowered standards would expect ninth graders to show the same improvement as seventh and eighth graders did. The ninth graders exhibited no such improvement.

Still, a proponent of the lowered standards counter-hypothesis might amend his hypothesis, and suggest that a "ceiling effect" limited ninth grade improvement. Since promotion rates were already high in ninth grade, no further improvement was likely.

Unfortunately, the two most promising methods for deciding between the hypotheses are disallowed us. We attempted to compare those schools which were traditional with those schools which worked under the Reform. However no small set of schools is a satisfactory unit for observation. Too many students appear and disappear from registers. We cannot separate students transferring to other schools from students dropping out of the system. Dropouts are also camouflaged by students who transfer in. The percentage of not-understood statistics of this sort is too high to permit valid inference about promotion rates.

The other promising method, that of extending the time series

to 1971 and 1972 is not possible. In Chapter 1, we described the major changes in the system of promotion. Starting with those finishing in October and November of 1971, almost all students have been assured of promotion. Only in extreme cases will students be asked to repeat a grade. Clearly, statistics gathered under such changed conditions will no longer be comparable to the data presented in Table 30.

Therefore, we have a suggestion of a positive effect of the new system, but are compelled to raise questions about it that we cannot now answer.

Chapter 5

PARENTS' ASPIRATIONS FOR THEIR CHILDREN UNDER THE NEW SYSTEM

Last year we reported that the aspirations of Salvadoran students for advanced schooling and professional careers continued to rise during the first two years of the Educational Reform. This trend was not accompanied, however, by any substantial broadening of awareness or interest in the kinds of middle-level technical careers that El Salvador's educational planners had hoped would attract the growing number of Third Cycle (Plan Basico) graduates. These findings suggested (1) that the students were not yet aware of the technical careers and training opportunities toward which their education was presumed to be directing them, and (2) that their aspirations were continuting to reflect highly traditional educational values and expectations.

To assess in greater detail the origin and strength of the students' aspirations we conducted a special study of Salvadoran parents. The sample of 247 was stratified by urban or rural residence, whether the sons were in Reform or traditional classes, and the expectation and aspiration levels of the sons. Interviews were conducted personally. It had been our original intention to talk to fathers only, but we had to back off from this restriction because we found so many homes with only the female parent, and a number of other cases in which a boy lived with a family other than his own. The final sample came out as follows:

TABLE THIRTY-ONE

Breakdown of Parent Sample According to Residence, School Category, and Aspiration/ Expectation Levels of Their Sons

Sons' Aspiration/ Expectation Levels	URBAN		RURAL		Total
	Reform	Traditional	Reform	Traditional	
High aspiration/ high expectation	34	42	35	12	123
High aspiration/ low expectation	21	29	23	9	82
Low aspiration	4	11	21	6	42

We wished to learn from the interviews not only what the parents thought about their sons' futures, but also how they regarded their own schooling or lack of it. Sixty percent of the parent sample had not completed the six-year primary cycle, and less than 20 percent had any schooling beyond the Plan Basico* (now, Third Cycle). Did the parents regret not having had more years of school? How much more schooling would they have wanted for themselves? What difference would more education have made in their lives? We felt the answers to these kinds of questions would best help to explain the levels of schooling parents deemed appropriate for their sons, as well as the strength of their commitment to see that their sons actually attained those levels.

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*We shall use "Plan Basico" rather than "Third Cycle" in this chapter, because that was the term in use at the time of the survey.

More than 90 percent of the parents deemed their own levels of schooling "insufficient" and said they wished they could have gone farther in school. How much more schooling they desired and their reasons for wanting it varied in consistent ways with their levels of educational attainment, urbanization, and SES. A majority of respondents in the most rural category, and a majority of mothers in all urbanization categories, wished simply that they had finished primary school. Their motives were also the most explicit: with more education they felt they would have been able to get steady jobs and earn more money. Parents in the other three urbanization categories considered Carrera Corta the right amount of additional schooling for themselves; with such training they felt they would have been able to move into a white-collar position. The relatively few parents (44) who had studied beyond the Plan Basico envisioned the university as the right amount of extra education for themselves. This group, in contrast to the others, justified its desires in abstract terms. These parents placed more importance on their own self-esteem and the personal satisfactions associated with being an "educated person."

Images of enslavement and servitude were dominant in the parents' descriptions of their low educational levels. Because they lacked a primary or secondary certificate, many parents felt they would never "escape" the threat of unemployment. Indeed, it was not the low level of their jobs that preoccupied them, but rather the threat that, without much schooling, all jobs would become increasingly difficult for them to obtain. The security of employment implied by advanced schooling

was also the precondition for being able to assist sons in the fulfillment of their aspirations. In fact, more than a third of the parents said that an important reason for wishing they had received more schooling was that it would have enabled them to help their children more.

Of course, few Salvadoran parents, if any, will ever have the opportunity to return to school. Yet their desire to do so and the level of education they judge necessary for themselves could be expected to play an important part in the amount of encouragement and support they give their sons. We tested this hypothesis in two ways: first, by examining the relationship between the parents' personal aspirations and the aspirations they held for their sons; second, by comparing the level of parents' aspirations with the aspirations and expectations of their sons. The pertinent cross tabulations are displayed as percentages in the next two tables. The relationships, both of which were statistically significant at the .001 level, suggest that parents' ambitions do influence the ways they think about their sons' educations, as well as the ways the boys look at themselves. We cannot be sure, however, that the pattern of influence is only one way. That is, the sons may have communicated certain preferences to their parents which the parents, in turn, adopted as their own. What seems most logical is a reciprocal relationship, with parents and sons each reflecting in their aspirations some awareness of the others' experiences and points of view.

TABLE THIRTY-TWO

Parents' Educational Aspirations for their Sons
by Educational Preferences for Themselves
(percentages)

Personal Educational Preferences	EDUCATIONAL ASPIRATIONS FOR SONS: Finish Plan Basico	Carrera Corta	Bachillerato/ University	Total
Finish primary	18*	47	37	25
Finish Plan Basico or Carrera Corta	8	35	57	47
Finish Bachillerato or university	2	29	69	27
N.A.	0	0	0	1

(N = 229)

*Example: of the parents who said they would like to finish their primary education, 18 percent wanted their sons to finish only Plan Basico.

TABLE THIRTY-THREE

Levels of Parents' Educational Preferences by
Boys' Educational Aspirations and Expectations

Parent Preference	BOYS' ASPIRATION/EXPECTATION LEVELS: Low Aspiration	High Aspiration Low Expectation	High Aspiration High Expectation
Finish primary	33	40	26
Finish Plan Basico or Carrera Corta	14	32	53
Finish Bachillerato or university	3	32	65*

(N = 225)

*Example: of the fathers who said they would like to complete a Bachillerato or university degree, 65 percent of their sons wanted the same education and were confident of getting it.

Besides determining the parents' amounts of formal schooling, we inquired whether they had participated in any training programs or taken any special courses since leaving school. We believed such activity would be a good indicator of serious interest in education and perhaps a good predictor of high aspiration levels as well. Our predictions were borne out in the data, but they had to be qualified by the fact that of the 59 respondents who had participated in such programs, thirty-eight (65 percent) lived in urban areas and all but seven were in the middle or high SES category. The concentration of such opportunities thus proved to be a severe limitation on the utility of the variable. The aspiration levels of these parents nevertheless proved to be considerably higher than those of their peers when urbanization and SES were controlled. The highest aspiration levels were found among fathers who had taken some special training associated with their jobs. Close to 70 percent of this group hoped their sons would complete advanced academic studies at the Bachillerato or university level.

A similar pattern was revealed when we asked the respondents to describe the current activities of the older children in their families. We coded their responses to this question according to the sex of the older children and according to whether or not they were still in school. When the parents named an older brother or sister who was no longer in school, we asked a series of follow-up questions concerning the level at which the child had quit school, and the reason he had quit.

As expected, the educational experiences of older children proved to be a rather good predictor of the parents' aspirations for the

boy in our sample. Two-thirds of the parents had older children and, among this group, 25 percent had older children who were still in school and at some level higher than Plan Basico. Parents in this category also had considerably higher aspirations for their sons than did parents whose older children were out of school, although the latter group varied widely according to the level of schooling obtained by the older children and their reasons for leaving school.

When we analyzed the parents' explanations for why their older children had left school, we found the following: 56 percent had quit school because they were poor and had to help support their families; 12 percent because they were unable to keep up with their school work; 12 percent because they wanted to get married; and 6 percent because they became ill and were unable to continue school. The remaining 14 percent had "finished" in the sense that they had completed all the schooling they desired. The high reported incidence of school desertion due to poverty, resulting in the need for boys to add to the family income, highlighted a fundamental economic problem which is likely to frustrate the aspirations of considerable numbers of young Salvadorans and their parents in the years to come. Students have traditionally reconciled the need to work with the desire to study by working during the day and studying at night. In rural areas, however, few night courses are available, so that a boy's desire to continue studying involves his relocation to one of the urban centers. The difficulties encountered by rural students who desire to work and study at the same time were shown by the fact that while 63 percent of the urban parents

had older children still in school, less than 50 percent of rural families did. In sum, we feel that the positive relationship between the educational achievements of older children and the aspirations of parents can be explained largely in terms of the underlying variations in SES and level of urbanization.

Parents' contact with the school and knowledge of the educational reform

We expected that most Salvadoran parents would have had only limited contact with their sons' schools prior to our interview. This hypothesis was based on the knowledge of the parents' own educational levels, and the feeling that they would be ill at ease and perhaps reluctant to deal with school directors and teachers, whose advanced education might intimidate them. Also, the ever-present shortage of operating funds, forcing school directors to continually solicit local financial support, has been a widespread deterrent to closer parent ties with the schools. In any case, we believed that differences in the frequency and quality of the parents' contacts with the schools would relate to differences in the parents' aspirations for their sons.

To our surprise, we discovered that all but 17 percent of the respondents had visited their son's school at least once previously that year. Their prime reason, in most instances, had been to pay tuition, although nearly 70 percent said they had also had the opportunity to discuss their son's progress with one or more of his teachers. As expected, a greater proportion of fathers from urban areas had been to their son's school than their cohorts in the countryside. Least knowledgeable on

matters pertaining to the school and their son's education were mothers from the rural areas.

The contrasts between different kinds of parents were amplified when we posed the open-ended question, "What do you like most about the education your son is receiving at this school?" The respondents were encouraged by the interviewers to name as many attributes as they desired, and their answers were coded both as to quantity and quality. Forty percent of the parents were unable to specify any concrete aspect of the school they particularly liked. Many among this group, which contained a disproportionate number of parents from rural areas, said they liked everything, or merely "the education my son is receiving." Another 40 percent were unable to list more than two reasons, the first usually being one of the two mentioned above. When prompted to think of additional qualities, aprents' answers fell into an interesting pattern. Respondents with sons in traditional schools tended to cite discipline as the outstanding characteristic of those schools; parents of boys in the pilot television classes mentioned either television or one of the concomitant reform programs. The remaining 20 percent able to name three or more qualities they liked about their sons' schools were predominantly men from urban areas.

Another interesting response pattern was elicited in answer to the query, "Without considering the cost, what changes would you like to see made to improve the education your son is receiving at this school?" Almost half of the parents either could not think of an improvement or were reluctant to suggest one, perhaps fearing that their son's position would be jeopardized by so doing. For those parents who

did respond, suggestions were almost equally divided among the need for physical improvements to the school building, the need for better teaching aids (science laboratories, libraries, etc.), the need for better teaching and course offerings. Different levels of sophistication were revealed in the parents' choices. Rural respondents mentioned physical improvements to the building twice as often as did urban respondents, but the proportions were reversed on the matter of teaching quality and curriculum change. Urban parents, presumably in a better position to compare the characteristics of different schools, also tended to make more suggestions than their rural counterparts.

Although El Salvador's educational reform had been in existence for over a year and had received extensive national publicity prior to our study, 55 percent of the parent sample could not remember ever having heard or read about it. Controlling for school category (i.e., reform vs. traditional), we were unable to qualify this low level of awareness. In fact, the comparisons revealed an unexpected trend: parents of boys in traditional classes were more cognizant of the educational reform than parents of boys in the reform classes themselves. This finding seemed to contradict what we had believed to be a positive effect of the reform in the parents' responses to our question on school attributes. Additional analysis revealed urbanization to be the key intervening variable in parents' knowledge of the reform. Seventy-four percent of all San Salvador respondents had heard of the reform, while this was true for less than 50 percent of the parents in the other three urbanization categories. The level of awareness was lowest in the most rural category, where less than one parent in five had heard of

the reform.

Among those parents who recognized the reform by name, only educational television and the teacher retraining program were identified by more than 10 percent as specific reform measures. Educational television was referred to specifically by 40 percent of this group, most of whom claimed they had seen one or more telecasts in their homes or at school.

Subsequent questions revealed that most parents held highly positive attitudes toward televised instruction, even though they did not know that such instruction was part of a comprehensive reform program. By means of a five-question battery, we measured the parents' reactions to different aspects of the television system--student learning and motivation, role of the classroom teacher, effect on student eyesight, and willingness to see the system expanded. The responses varied sharply according to whether or not the parent had a son in a television classroom. In cases where the son was receiving televised instruction, parental attitudes were extremely favorable, regardless of parent sex or urbanization level. Among parents whose sons were in traditional classes, less positive attitudes predominated, particularly in the urban areas. These findings may be explained at least in part by the nature of the two schools that comprised our urban/traditional sample. Both are among the small group of public Planes Basicos in El Salvador which require students to pass an entrance exam. Because of this and other factors, these schools enjoy a high prestige among Salvadoran parents and students. It is conceivable that the introduction of television into these schools was viewed by parents as a levelling force which would

deprive their sons of the rather special status they have enjoyed.

Parent reactions to television are shown in the next table.

TABLE THIRTY-FOUR

Proportions of Parents Who Said ETV Should Be Expanded
By Urban and School Categories

	Television Classes	Traditional Classes
Urban	88%	56%
Rural	78%	80%

(N = 224)

It is also noteworthy that whereas a majority of the rural/traditional respondents had expressed moderately negative attitudes toward ETV on the question battery, 80 percent of those who expressed an opinion on the final question said they favored the expansion of the system. We attribute this inconsistency to the fact that many rural parents had little basis on which to evaluate the television system, and their responses on the first few questions reflected intuitive judgments or prejudices based on their feelings toward commercial television. For example, in response to our first question regarding the quality of student learning with television, one rural parent remarked, "Only robbery and killing are taught on television." Yet this same individual, having become more aware of the nature of the ETV system by the end of the interview, was able to favor the expansion of that system. On the basis of this small piece of evidence, we may attribute some of the

observed inconsistency to the didactic power of our own interview questions.

As stated, we found widely varying levels of parental interest in the schools. A majority of the women respondents and virtually all the respondents in the most rural group were unable to specify any school characteristics they either liked or would like to see changed. Knowledge of the educational reform was also limited, although a majority of the parents held highly favorable opinions toward educational television when specifically questioned about it. When the parents' responses on these questions were cross-tabulated with their levels of educational aspiration for their sons, a consistent relationship was uncovered: the greater a parent's familiarity with the school and the more explicit his praise or criticism of it, the higher tended to be the educational aspirations he had for his son.

The content of parents' educational aspirations

An important objective of our study was to learn not only how far Salvadoran parents wanted their sons to go in school, but also the reasons behind their choices and the strength of their commitment to them. Accordingly, the interviews were structured both to elicit the parents' preferences and also to test their consistency. This was accomplished by having parents react to a series of obstacles and situations that were known to have hindered the fulfillment of educational aspirations in the past.

The following table displays the levels of schooling Salvadoran

parents desired for their sons, and the levels their sons selected for themselves at both the beginning and end of the eighth grade.

TABLE THIRTY-FIVE

Comparison of Parents' and Sons' Educational Aspirations (Percentages)

	Finish PB	Finish CC	Finish Bach.	Finish Univ.
Parents (Sept., '70) N = 247	9	36	16	39
Sons (Mar., '70) N = 247	9	7	32	43
Sons (Oct., '70) N = 231	5	14	23	58

The discrepancy between parents and their sons at the Carrera Corta and Bachillerato levels is partly the result of our sampling strategy, but it also indicates the different ways the generations think about education and eventual employment possibilities. Before elaborating on that point, it is useful to examine the parents' preferences in greater detail.

Parents' levels of educational aspiration were strongly related to the demographic variables discussed earlier in this chapter. Seventy-five percent of the parents from San Salvador wanted their sons to continue through the secondary or university level, while less than 40 percent of parents from the most rural areas held a similar preference. Mothers had generally lower aspirations than fathers. A majority of the women respondents said they wanted their sons to study no farther than

the Carrera Corta level; only 35 percent of the fathers said that a similar amount of schooling would be sufficient. When we controlled for urbanization, the sex differences were qualified somewhat. As Table 36 illustrates, the aspirations of urban women fell between those of the urban and rural men, but rural women were heavily concentrated at the lower half of the scale. Less than 35 percent of this group wanted their sons to study beyond the Carrera Corta. The greater incidence of missing fathers and the poverty of many rural families made it seem likely that mothers in this group were counting on their sons to become family breadwinners as soon as possible.

TABLE THIRTY-SIX

Educational Aspirations of Parents for Sons
By Sex, with Urbanization Levels Controlled
(Percentages)

	Finish PB	Finish CC	Finish Bach.	Finish Univ.
Urban men (74)	5	28	15	51
Urban women (67)	5	34	18	43
Rural men (46)	11	30	24	35
Rural women (59)	15	53	8	24

To gain a richer understanding of the rationale behind the parents' aspirations, we asked them to specify what advantages there would be if their sons completed the schooling they had mentioned. This

was a difficult question that required a great deal of interviewer skill and persistence. Additional time was provided for posing this question, and a common set of cues was developed after the pretest to help the interviewers mine as much information as possible from it. Both the quantity and quality of the parents' answers were coded.

The number of different advantages the parents could give covaried to a significant degree with both the level of their own education and the education they wanted for their sons. Thus, 42 percent of the parents with no schooling and 57 percent of the parents at the lowest aspiration level could not name more than one advantage or reason why their sons should finish Plan Basico. In contrast, over 45 percent of the well-educated parents and those who wanted their sons to reach the university were able to express three or more advantages. Two was the modal number of responses among all subject.

We were able to extract three underlying themes from the scores of different advantages Salvadoran parents associated with the amount of schooling they desired for their sons. Of prime importance to over 40 percent of the sample were the kinds of jobs a young man would qualify for by staying in school beyond the Plan Basico level. Tied to the aspirations of this group for advanced academic training--Carrera Corta, Bachillerato, or university--was the vision of a career which would guarantee their sons, and indirectly themselves, a more secure future. On this same theme, many parents made a distinction between a career and a job. To them, the term job (trabajo) referred to work that was predominantly manual in nature and low in pay, while career (carrera) implied a more respected position which carried with it the chance for

advancement and higher financial rewards.

A second theme, and one which emerged particularly within the middle and high SES parents, was that of self-esteem. Parents who cited this "advantage" took note of the need for their sons to act independently and with self-confidence in their society. Educated persons, they felt, were their own masters in the sense they could not be taken advantage of in ordinary business affairs. The patriotic sentiment that educated people were of greater value to the nation was another frequently mentioned advantage related to this same theme.

The final theme, encompassing approximately a quarter of the responses, was that of "helping the family." To be sure, this theme was related to that of employment, but it also had a directness and sincerity about it that deserves special attention. Parents who saw this kind of "advantage" emphasized the important role that an educated son would ultimately be expected to play in his family. In this sense, advanced schooling implied increased responsibility for the educated son. Parents who responded in this way were generally poor and from the more rural areas. To a great extent, they seemed to regard an educated son as an emissary to the modern world--an emissary who would be successful enough to provide for other members of the family who had not enjoyed the same opportunities and good fortune.

As a means for assessing the consistency of parents' aspirations and the strength of their commitment to them, we posed a number of questions related to the kinds of decisions that they might be expected to make in the near future vis-a-vis their sons' schooling.

Although we did discover some important variations according to both SES and level of aspiration, our overall impression was that the parents were quite willing to make the kinds of sacrifices that would be required to keep their sons in school through the levels they (i.e., the parents) desired. We do not deny the possibility that the respondents were hesitant to express their true misgivings or doubts to our interviewers, whose purposes remained somewhat uncertain to them. After careful consideration of their responses, we suspect that the parents did underestimate the factors that might impede the fulfillment of their aspirations, but the fact that they did so in a consistent manner is in itself a measure of the importance most Salvadoran parents place on education.

The most unanimous agreement was elicited from the question, "If your son had to leave the family and live in another part of the country in order to continue his studies beyond Plan Basico, would you encourage him to do so?" Over 90 percent of the respondents in all categories said they would encourage such mobility. This result should be encouraging to Salvadoran educational planners whose project to diversify the structure of the Bachillerato curriculum calls for the establishment of specialized institutions in different parts of the country. Of course, we must also keep in mind that El Salvador is a small country, and that many students leave their homes to study during the week and return to them on weekends. This custom inevitably reduces some of the economic sacrifices that individual families are called upon to make in order to keep their children in school away from home.

When we asked the parents directly whether or not they would be willing to pay the extra costs involved in sending their sons away to school, 58 percent responded with an unqualified "yes," 35 percent said they would be willing to meet only part of the costs, and 7 percent said they would not be willing to pay. The degrees of willingness varied according to level of aspiration, with more than two-thirds of high aspiring parents saying they would pay whatever would be necessary. Less than half of the lower aspiring parents (i.e., those who desired their sons to complete Plan Basico or Carrera Corta) were willing to bear the costs. As expected, these differences were closely associated with the parents' real ability to pay. Thus, while half the parents in the low SES category said they would not be willing to pay all the extra costs to send their sons on in school, more than 65 percent of the parents in the other SES categories were inclined to do so.

Stronger evidence of consistency was discovered in the parents' responses to a question concerning the age at which they thought their sons should be fully self-supporting. We hypothesized that if high-aspiring parents were consistent in their thinking, they would be more favorably disposed to help their sons secure the extra schooling they desired. Such support, particularly in the case of university studies, would imply some financial commitment well beyond a boy's twenty-first birthday. This hypothesis was supported by the finding that 50 percent of the parents who wanted a university education for their sons also said they would be willing to help support them beyond their twenty-third birthdays, whereas less than 25 percent of parents with other

levels of aspirations expressed the same willingness.

In yet another test of the parents' consistency, we asked, "If your son were to be offered a good-paying job at the end of Plan Basico, would you encourage him to take the job or to continue his studies?" The discriminative power of this item was reduced somewhat when many parents refused to accept the dichotomous choice of our question, and answered that they would encourage their sons to take the job and to continue studying simultaneously. Apparently, they thought it possible for their sons to have their cake and eat it too, a pattern which, as we have mentioned, is not uncommon in El Salvador, where many students enroll in evening study programs after the Plan Basico. Nevertheless, the dichotomy was perceived by more than half of the respondents, and they answered in a highly consistent fashion: 56 percent of the parents who desired a Bachillerato or university education said their sons should not accept a job; less than 30 percent of parents who held lower aspirations felt the same way.

The items we had designed to challenge the consistency of the parents' educational aspirations for their sons had not succeeded in undermining their confidence. As a summary question, we asked them to be as realistic as possible and to tell us how sure they were that their sons would finish the level of studies they had specified. Eighty percent said they were either "positive" or "fairly sure" that their sons would finish. When we controlled for urbanization and sex, we found that only rural women deviated from this high level of confidence: thirty percent of this group said they had little or no confidence that their sons would finish. As mentioned previously, rural women were over-

represented in the low SES group, and their aspirations were consistently below those of other respondents. In sum, we found that although this sample of Salvadoran parents held generally lower educational aspirations than their sons, their expectation levels were equally as high.

The content of parents' occupational aspirations

The last topic investigated in our interview concerned the level and range of the parents' job preferences for their sons. We wished to know whether or not the parents had given this subject serious consideration and, if they had, on what criteria their preferences had been formed. We suspected, (1) that the parents' low socio-economic backgrounds would inhibit their ability to project their sons into high job categories; and, (2) that, in contrast to their sons, the parents' reasons for selecting different jobs would be tied more closely to considerations of salary and the guarantee of secure employment.

A review of the parents' own jobs revealed that only 20 percent could be clearly identified as requiring preparation beyond the primary level. Over three-fourths of the women respondents were housewives, and the remainder listed seamstress, nurse, or primary school teacher as their occupations. Among male respondents we found a preponderance of tenant farmers, semi-skilled craftsmen, and day-laborers. Fewer than 25 percent of the men held middle or high level positions, and of those that did, more than three-quarters resided in the major metropolitan areas.

There was also a clear sense of resignation among the majority of

parents regarding their own low level jobs. Without education, they said, they could expect no more from life. This view was underlined when, among those parents who said they preferred a different kind of work to the job currently held, almost two-thirds mentioned alternative occupations within the lowest job category. The question of an ideal job also failed to stimulate the imaginations of the parents. To be sure, more parents mentioned higher level positions as their ideal, but less than 10 percent chose the kinds of professional careers that had attracted their sons. The dream of owning their own farm or small store, or perhaps working in an office, was the "ideal" of the great majority of rural respondents. Urban respondents, who had more education and better jobs to begin with, leaned toward business as their ideal career.

When we asked parents to recount what occupation they would most like to see their sons enter after completing school, their horizons broadened considerably. Thirty-three percent favored a professional career, 47 percent a middle level occupation, and 20 percent a low level job. Although these selections were somewhat lower than the ones the boys themselves had chosen (see Table 37), it was clear that the parents' preferences for their sons had not been unduly restrained by how they regarded their own situations. Parents also were consistent in choosing jobs that matched the level of education they had previously indicated would be appropriate for their boys. The strength of this association was shown when a rank-order correlation of these variables yielded a coefficient of .55. Thus, in contrast to our hypothesis, it appeared that the parents' lack of imagination--i.e., their inability

to project themselves into other roles--did not apply to the same extent in matters pertaining to their sons. Perhaps sensing that their boys had crossed the most important bridge to opportunity (i.e., they had entered the secondary school cycle), the parents were now able to envision greater success for them.

TABLE THIRTY-SEVEN

Levels of Job Aspirations of Salvadoran Parents and Their Sons (Percentages)

	JOB LEVELS		
	Low	Middle	High
Parents (N = 247)	20	47	33
Sons (N = 247)	3	47	50

Familiar variations according to sex and place of residence were echoed in the job preferences stated by the parents. Although a middle level career was the modal choice of respondents of both sexes and from each urbanization category, substantial differences were uncovered in the proportions choosing high and low level occupations. Forty percent of all male parents desired a professional career for their sons as against 27 percent of the female respondents. By coincidence, the exact same percentages also distinguished urban and rural respondents. As expected, rural women held the lowest aspirations for their sons--more than 25 percent of this group mentioned a low level

job as first choice.

The five careers most frequently mentioned by the parents are displayed in the next table, alongside the ones selected by their sons earlier in the year:

TABLE THIRTY-EIGHT

Careers Most Frequently Selected by Parents and Sons and the Proportions of Respondents Who Mentioned Them

Parents	Sons
Accountant (26)	Engineer (19)
Doctor (10)	Accountant (13)
Engineer (8)	Doctor (12)
Agricultural technician (8)	Bachiller (10)
Mechanic (7)	Agricultural technician (8)

On the surface it would appear that there was considerable agreement between parents and sons, and that the two generations overlapped in their assessments of what are the most desirable occupations in El Salvador. To explore this point, it was useful to probe more deeply the reasons behind the parents' choices.

In an open-ended question, we asked the parents to explain why they preferred the career they had mentioned for their son. Although the item proved difficult to code at first, four basic reasons were eventually extracted from the parents' responses: Salary, security of employment, opportunity for self-improvement, and dignity of the job itself. Among parents who selected accountant and mechanic, the first

two reasons were paramount. These were generally poor respondents who were counting on their sons to help provide for the family as soon as possible.

Agricultural technician was the third overall choice of rural respondents and it was justified by most of this group on the basis that their boys would enhance their capabilities and social positions by entering this career. A second reason was that formal training in agriculture would give future farmers a scientific expertise, and the basis on which to cultivate a more extensive piece of land than that currently worked by the parents themselves.

The respondents who said they wanted their sons to be either doctors or engineers emphasized the dignity of those professions over their pay and security. Their reasoning paralleled most closely that of the students, who, we recall, mentioned dignity and the chance to help others as the guiding motives behind their aspirations. Urban fathers were disproportionately represented among parents who wanted their sons to enter the professions, and they were the only ones who claimed, in more than 10 percent of the cases, that their choices were based on perceptions of their sons' interests or abilities.

To determine whether the overlapping choice patterns of parents and sons were coincidental or the result of personal interaction, we asked the parents if they knew their sons' job preferences and, if so, to tell us what they were. As an unobtrusive measure of the consistency between the generations, we were then able to cross-tabulate the actual choices of the boys with the ones their parents attributed to them.

Sixty-eight percent of the parents said they knew what jobs their sons aspired to, and this proportion did not vary substantially when the groups were broken down by sex, urbanization, or SES. However, when the choices the boys had made at the beginning of the year were matched against the ones their parents had indicated, we discovered that there was agreement in only one-quarter of the cases. There are a number of possible interpretations for this lack of consistency: the boys' aspirations may have changed in the interval between our classroom survey and the parent interviews, meaning that the parents' responses represented more current information; the boys and/or their parents may have systematically distorted their responses, thus undermining the reliability of our instrument; or the parents may have really been ignorant of their sons' preferences and simply responded in a manner consistent with their own feelings on the subject.

Doubt was cast on the first interpretation when we reviewed the occupational preferences of the boys at the beginning and end of the year, and found that more than 75 percent of them had expressed the identical choices at both time points. This made it seem unlikely that change within the students was responsible for the discrepancy. The second point was more difficult to dispute because the reliability of research instruments can never be established beyond the shadow of a doubt. Nevertheless, because our aspiration measures have resulted in such stable and equivalent patterns across two large student samples in two school years, we do not feel that the inconsistency between generations could be attributed solely to factors related to the reliability

of our student questionnaires. In any case, if the students have distorted their true preferences, they have done so in a highly consistent fashion. The most probable explanation was that the majority of parents were not really aware of their sons' choices, but were reluctant to admit it. When asked to be specific, they therefore gave us what amounted to a best guess of their sons' preferences. The contrasting levels of reported aspiration revealed that the parents' estimates may have been based largely on their own preferences:

TABLE THIRTY-NINE

Comparison of Responses Pertaining to Occupational Aspiration: Sons' Aspirations; Parents' Aspirations for Sons; and Parents' Perceptions of Sons' Aspirations (Percentages)

	Levels of Occupational Aspiration		
	Low	Middle	High
Sons' self-reported aspirations	3	47	50
Parents' aspirations for sons	20	47	33
Parents' perceptions of sons' aspirations	22	48	30

Relationship between parents' and sons' aspirations

We concluded our analyses by reexamining the aspiration and expectation levels of the boys whose parents had participated in our interview study. As we have mentioned, the boys represented three different groups: some had expressed high aspirations and high expectations; others held high aspirations but low expectations; the third

group held low aspirations. We wished to learn whether the boys' positions on these scales, which we had formed into a single index, were related in significant ways to the backgrounds and attitudes of their parents.

As expected, all of the variables we have discussed in this chapter vis-a-vis parents' aspirations were also related to their sons' levels of aspiration and expectation, boys from urban families, from families where parents had more than a primary education or had mentioned high educational ambitions of their own, and from families where one or more older children were still in school, tended to express higher aspirations and expectations than other boys. The boys' general ability rankings and levels of SES also correlated to a significant degree with aspiration, but not as strongly as the specific variables associated with the parents' own educational profiles. The relevant correlation coefficients are presented in the following table.

TABLE FORTY

Correlation Matrix of Parent Variables
and
Levels of Sons' Educational and Occupational Aspirations

Correlation With:	Sons' Educational Aspirations	Sons' Occupational Aspirations	Aspiration/ Expectation Index
SES index	.23	.19	.19
Urbanization	.33	.37	.20
Sons' general ability scores	.27	.20	.16
Parents' education	.33	.16	.30
Parents' educational aspirations for themselves	.30	.22	.29
Parents' educational aspirations for sons	.30	.21	.28
Parents' occupational aspirations for sons	.17	.23	.17

Another parent variable that was also related to the boys' aspirations was sex of the respondent. A majority (58 percent) of the boys whose fathers were interviewed held high aspirations and expectations, as against 44 percent of those whose mothers participated in the study. Salvadoran women were less experienced in matters pertaining to the educational system, and the aspirations of their sons were generally lower and more inconsistent than those of the male respondents.

In the reporting of research results, there is a tendency to become lost in a panoply of variables and statistically significant relationships, thereby losing sight of the very human motivations and values which first intrigued the researcher. The intention of this chapter has been not only to present research results, but also to illuminate in a qualitative way how Salvadoran parents think about their sons' futures.

With few exceptions, we discovered that the parents had little contact with or knowledge of their sons' schools, yet they placed a tremendous importance on education per se. Perhaps because of their own lack of experience in this area, the parents do not seem to have directly influenced the educational aspirations or expectations of their sons; rather, their influence has been indirect and tied closely to underlying variations in their own educational experiences, social class, sex, and place of residence.

The ability to obtain a steady, relatively well-paying job was the sole justification for advanced schooling in the eyes of most

Salvadoran parents. The positions they envisioned for their sons paralleled the choices the sons themselves had made, but there was little evidence that parents and sons had discussed this topic seriously among themselves. Nevertheless, the occupational aspirations of both generations were concentrated largely on the careers which have traditionally carried with them the promise of social mobility and prestige.

If future training opportunities, as proposed in the educational reform, are not seen by parents and students as providing the same promise of social mobility and prestige, and if that training fails to lead to employment, two results seem virtually inevitable: increasing frustration and an unwillingness to accept these alternative educational programs.

Chapter 6

ADMINISTRATIVE HISTORY OF THE REFORM

From the beginning of our association with the project, we have been gathering data, examining records, and conducting interviews on the administrative history of the Reform itself--how the key decisions came to be made, the problems that had to be faced, and the lessons to be learned by other countries or other educational systems. In 1971, John and Judith Mayo completed additional interviews, and wrote an account of the Reform from the beginning through 1971. This has been published as one of our Research Reports (No. 8), under the title An Administrative History of El Salvador's Educational Reform.

This report will be brought up to date in the final report of the project, but there may be good reason to reproduce a little of the material here where it will be available to readers who do not have access to Report No. 8 in its entirety.

In the following pages, therefore, we shall present a chronological outline of the early history of the Reform, up to the time ITV went on the air in 1969 (readers may be surprised at the length of the preparation time), and a few conclusions from El Salvador's experience.

Chronological outline of the Reform's early years

1960. Possibility of introducing ITV being discussed in El Salvador newspapers.

1962. Survey by NHK engineers arranged by Walter Beneke, Ambassador of El Salvador to Japan. Survey team recommended a national system of ITV.

1963. President Rivera established an Educational Television Commission. It was supposed to recommend a national plan for ITV by 1964, but progress dragged. Arranged to send some young men to Japan for a year of engineering training, but they had no ITV jobs when they returned.

1964. Department of Educational Television created within Ministry of Education, but for two years this Department had no leader and no budget.

1965. Educational Television Commission revitalized when Lic. Beneke returned from ambassadorial post in Japan, and was appointed chairman of the Commission. Key new appointments were made, and the Commission began to hold weekly meetings. Studied experience of other countries with ITV, and made statistical analysis of educational system.

1966. Commission decided that ITV should be introduced first into the seventh, eighth and ninth grades (Plan Basico), and recommended that it be organized as an autonomous institution reporting directly to the President, rather than within Ministry of Education.

1966. UNESCO team trained first ITV staff members, and helped Commission broaden concept of requirements of successful ITV.

1967. Small program of experimental production begun using rented facilities of commercial TV station.

1967. Aid in financing ITV sought from Mexico, Guatemala, Japan,

USAID, UNESCO, World Bank. World Bank made another feasibility study, with generally favorable results.

1967. (Spring) President Fidel Sanchez Hernandez heard President Lyndon B. Johnson speak at Punta del Este of possibility of financing pilot project in ITV somewhere in Latin America, and put El Salvador's case before U.S. officials. A survey team sent by AID, and recruited by National Association of Educational Broadcasters, recommended a favorable response to El Salvador proposal. The team, however, pushed for a large project at primary school level. Salvadorans resisted this latter recommendation, and eventually prevailed.

1967. (July) Lic. Beneke named Minister of Education, and opposition to placing ITV in the Ministry evaporated.

1967. (Summer) Formal proposal submitted by Salvadoran government to USAID.

1968. (Spring) Formal project agreement signed between El Salvador and USAID. Latter agreed to contribute $653,000 to start-up costs of project--largely studio and transmission equipment, graphic arts equipment and printing machinery, and 100 television receivers.

1968. A U.S. loan of $1.9 million was to back up this AID contribution, and make it possible for El Salvador to construct and provide new studio and transmission facilities, and receivers to cover almost entire country. This loan was delayed, both by slow action in the El Salvador National Assembly, and by freezing of U.S. funds for a time as result of war between El Salvador and Honduras. Authority for the loan was finally obtained in October, 1970, putting the project effectively

two years behind schedule.

1968. Minister Beneke closed most of the normal schools, which had been over-producing primary teachers, and established a new centralized normal school at abandoned campus in San Andres.

1968. Temporary studio equipped in building at San Andres.

1968. Recruitment and inservice trainin· of ITV staff (total of 20 in spring of 1968, 200 at end of 1971).

1968. USAID supplied first group of advisers in production, graphics, film, curricular revision, printing, utilization, evaluation. From 1968 through 1971, nearly 30 foreign advisers aided the project.

1968. (November) Tentative revision of seventh grade curriculum completed and given to ITV production teams and instructors at San Andres. Production teams had three months to make classroom materials, teachers guides, and TV programs. Normal school faculty had three months in which to retrain 100 teachers for TV classrooms, and 12 candidates for positions as utilization supervisors.

Some conclusions from El Salvador's experience

The history of El Salvador's Educational Reform is by no means complete. In many areas the dust from so much activity has just begun to settle and more time must pass before the full effects of so many far reaching educational changes can be adequately appraised. For this reason, it may seem presumptuous to draw many conclusions at this time. Yet the Reform has received considerable international attention and it has intrigued planners from other countries who are also considering

the application of television or other technological innovations to help solve educational problems. These planners would like to duplicate many of El Salvador's accomplishments and, at the same time, avoid the difficulties she has encountered. We feel justified, therefore, in summarizing our research in terms of the administrative "lessons" that have emerged so far from ıe Salvadoran experience.

The importance of local initiative and control

In contrast to many other nations which have relied upon foreign models and foreign advisers to institute instructional television projects, El Salvador drew heavily upon its own resources and insisted upon strong local control from the outset. The energy and sense of purpose which characterized the ETV Commission under Walter Beneke were carried through in the establishment of the ITV Division within the formal framework of the Ministry of Education. Beneke insisted that Salvadorans assume responsibility for all phases of the Educational Reform, including television. Accordingly, Ministry of Education officials were justly credited with the project's successes but also held strictly accountable for its shortcomings. In some instances, as we have pointed out, local officials were unable to cope with the complex tasks of coordinating the reform programs and some glaring administrative inefficiencies remain to this day. In retrospect, however, this seems a relatively small price to pay for maintaining the Reform's strong national character.

The importance of integrated change

El Salvador's reform experience suggests that the introduction of an educational tool such as television is best considered in terms of a country's entire educational system. ITV for core teaching was not simply imposed over existing programs and structures in El Salvador; rather, an effort was made to define broad system needs and to fit television to those needs. It was discovered early in the Reform that most elements of El Salvador's traditional educational system would have to be changed if television were to be employed effectively. As a result, the curriculum was revised extensively so that its focus would be on relating and applying concepts rather than on remembering facts; an extensive teacher retraining program was carried out so that teachers could become familiar with the new curricular content and their new teaching roles; and classroom materials for teachers and students were developed to accompany each televised lesson.

These broad, across-the-board changes in Salvadoran education often required teachers and even Ministry officials to accept and implement policies they had not made. Frequently, their acceptance was hard won. Some felt that the new ITV system was exerting too much pressure on other areas of the Ministry. The curriculum writers, for example, balked at the idea of reforming the existing programs of study for television.

Likewise, Beneke's sudden closing of the nation's normal schools caused resentment, although the reduction in teacher unemployment, as well as the widely-recognized quality of the retraining provided at

San Andres, have produced a generally positive reaction among teachers and mollified resentment considerably. Even so, directors of the former teacher training institutions and graduates of the Superior Normal School, who feel their status has been undermined by the new retraining programs, remain unaccepting. The least successful aspect of the Reform has been the attempted transformation of the school supervisor from inspector to consultant. Most supervisors are resistant to this change because they fear that their authority and prestige will be sacrificed if they act as advisers rather than as policemen.

The importance of strong leadership

An extremely important factor in the history of El Salvador's Educational Reform has been the support it has received from the highest levels of government. President Fidel Sanchez Hernandez made educational reform the prime focus of his administration, and that commitment, coupled with the fact that Salvadoran presidents are limited constitutionally to one, five-year term, meant that the reform programs were designed to be implemented in a relatively short period of time.

The job of carrying out President Sanchez' mandate was given to Lic. Walter Beneke, one of the first advocates of instructional television in El Salvador. As chairman of the ETV Commission and later as Minister of Education, Beneke displayed a relentless commitment to upgrading the quality of El Salvador's educational system. Working from a detailed, five-year educational reform plan, and using the new ITV system as a vital pacesetter, Minister Beneke became personally

involved in the day-to-day progress of each one of his programs. Whether the reform in El Salvador would have taken place without him cannot, of course, be proved; in any case, it would almost certainly have come later.

In retrospect, Beneke's forceful leadership also seems to have had certain negative side-effects. By entering directly into many of the day-to-day problems of his various divisions, the Minister inadvertently impeded the growth of problem-solving abilities among his chief subordinates. The majority of the Ministry's division leaders were, in fact, dependent on Beneke's judgment, and most were fearful to act without his approval. This tendency retarded horizontal communication among divisions, and forced the minister to deal with many matters that could properly have been handled at a lower administrative level.

As the motivating force behind the Educational Reform, Beneke also became the target for a great deal of criticism from ANDES, El Salvador's principal teachers' union. During this period of rapid change, the teachers' feelings of being underpaid were exacerbated and their protests became increasingly strong. Curiously, the union's criticisms were directed at the Minister personally, and only occasionally at his reform programs. In July and August of 1971, the union conducted its second major strike in three years, which was settled ultimately on terms favorable to the Ministry of Education. In September of 1971, Beneke was appointed Minister of Foreign Affairs, and his former sub-secretary named Minister of Education. How this change will affect the reform programs and the union's behavior is not yet clear.

The contribution of foreign advisers

While maintaining the principle of local control, the Salvadorans were able to make good use of many foreign advisers. The advisers were helpful in getting many of the reform programs underway, but their contributions varied greatly according to their Spanish-speaking abilities and the degree to which their particular skills were directly transferable to Salvadoran counterparts. Foreign advisers working in the more culturally and politically sensitive areas of curriculum reform and school supervision encountered many more problems of acceptance and cooperation than did those in the technical areas of ITV production.

Two advisers deserve special mention for their contributions to El Salvador's Educational Reform. They were Dr. Bruno Stiglitz, the Ministry's senior UNESCO adviser and Dr. Stanley Handleman, USAID's Chief Education Officer. Dr. Stiglitz worked at the right hand of Minister Beneke on a day-to-day basis, helping to plan and implement all of the reform programs. Dr. Handleman, an expert in ITV who had been a member of the original NAEB/USAID feasibility study team, helped design the ITV system and was an important force in developing and carrying out the notion that ITV would be most effective as part of a broader system change.

Looking ahead

In November of 1971, the first group of students to complete a

full three years of study under the Educational Reform graduated from El Salvador's Plan Basicos. Their graduation symbolizes the success that the Salvadoran's have had in carrying out the reforms they began in 1968. In a sense, that achievement represents only the first plateau of educational reform. Getting the system into operation (i.e., revising curricula, retraining teachers, and transmitting teleclasses) has been accomplished. As the Salvadorans themselves recognize, however, many qualitative aspects of the Reform must be improved. To do so will require additional in-service training of ITV's production teams, better evaluation techniques and feedback mechanisms, and improved school supervision to aid teachers' implementation of the Reform's programs.

The recent resignation of Walter Beneke from the Ministry of Education has removed the Reform's principal architect and leader. As a result, the Educational Reform faces the problem of continuity, and that problem will come into sharper focus after El Salvador's presidential election in March of 1972, when it is likely that a new Minister will be appointed. A crucial task facing the new Minister will be to strengthen the foundation of the Reform by improving the quality of the programs initiated during the last four years.

Chapter Seven

RESEARCH TO COME

As we have indicated, the teachers' strike of 1971, coming as it did just after tuition had been eliminated and Third Cycle education opened to everyone qualified, seriously disrupted the rhythm of Educational Reform in El Salvador. It was also a stiff jolt to a four-year evaluation study.

It was perhaps fortunate that the strike came in the third, rather than the final year, of that study. In 1972, barring further unexpected events, we shall be able to see the Reform extended to the entire Third Cycle, although we can only guess at what the fourth year learning scores and attitudes might have been without the events of 1971.

We shall be alert, therefore, to the dimensions of change in 1972: whether student and teacher attitudes will climb back to their previous favorable levels from the depression of 1971; whether the gains will again be as large as they were before 1971; whether administrative problems will become less; or whether some long-term damage has been done to the system.

In addition, therefore, to collecting the usual figures on learning, attitudes, ability, and so forth, which we can use for comparison from year to year, we are going to collect some rather special

information in order to put the basic data into sharper perspective.

For one thing, we shall be making a detailed observational and testing study of two classrooms, who will be using television for the first time. We shall be studying a sample of students who graduated in November, 1971--the first group that spent three full years in the Reform system--in order to find out what happens to their career and educational plans, and what, after due time, they think of the kind of education they received in Third Cycle. We shall have a report on the changes in ability scores during the four years of the Reform. We shall also be analyzing and reporting a study of the effects of television on problem solving, both in order to get farther below the achievement scores and also to work with a non-experimental method for studying causal relationships.

In order to leave a tested system behind us when we complete our work in El Salvador, we shall continue to work with the methods we have been using to obtain frequent feedback from the classroom on learning from a unit of study, and shall publish a report on the method. We shall also work as much as time and resources permit with the specifying of behavioral objectives for television lesson plans, and the pretesting of television programs.

A fourth year summary report will be available in the spring of 1973, a report of the entire project in summer of that year.