DOCUMENT RESUME

ED 077 189 EM 011 066

AUTHOR Schramm, Wilbur
TITLE ITV in American Samoa--After Nine Years.
INSTITUTION Stanford Univ., Calif. Inst. for Communication Research.
SPONS AGENCY Agency for International Development (Dept. of State), Washington, D.C.
PUB DATE Mar 73
NOTE 63p.

EDRS PRICE MF-$0.65 HC-$3.29
DESCRIPTORS *Achievement; Comparative Analysis; Costs; *Developing Nations; Expenditure Per Student; Instructional Media; *Instructional Television; *Language Proficiency; *Research Projects; Student Attitudes; Teacher Attitudes; Technological Advancement
IDENTIFIERS *American Samoa

ABSTRACT

This is the first report on the instructional television (ITV) project in American Samoa in which it has been possible to base conclusions on any considerable amount of hard data. There is insufficient evidence to make conclusive comparisons of academic levels in 1964, the start of the project, with those today. However, experimental evidence shows that the longer pupils in any given grade had been exposed to television, the better their English performance. This is important as English is the language of instruction. Because they are in English and do not fit the Samoan curriculum or culture, mainland standardized tests are inadequate to measure Samoans' performance. Attitudes toward instruction by television decline sharply in the upper grades and high school, and between elementary and high school teachers. It is possible that after teaching standards rise (in part because of ITV itself), students and teachers become impatient with the mass and central control of the broadcasts. The annual cost of ITV is about $157 per pupil, plus or minus 15%, including capital equipment and interest. After nine years, the chief administration of the project is in the hands of Samoans, from the director of education down through teachers. (JK)

ITV IN AMERICAN SAMOA -- AFTER NINE YEARS

BY

WILBUR SCHRAMM

INSTITUTE FOR COMMUNICATION RESEARCH
STANFORD UNIVERSITY
MARCH, 1973

COPY

INE YEARS

ESEARCH

ITV IN AMERICAN SAMOA -- AFTER NINE YEARS

by

Wilbur Schramm

Institute for Communication Research
Stanford University
March, 1973

Work performed under Contract
No. AID/csd 3284 between the
Agency for International Development
and the Institute for Communication
Research, Stanford University,
Stanford, California.

SUMMARY

This is the first report on the ITV project in American Samoa in which it has been possible to base conclusions on any considerable amount of hard data.

The new data include (a) three years of standardized achievement testing in the American Samoa high schools, two years in the elementary schools; (b) a number of locally-made and criterion-referenced tests; (c) several small experiments on language arts and mathematics; (d) standardized tests of English language proficiency; (e) a new study of school children on the one island in American Samoa that has never had television, in an attempt to estimate the extent of change since the project began; (f) an attitude survey of teachers and students; (g) a new cost study; and (h) some experimental comparisons, not yet complete, of the language strategies of the two Samoas.

During the first years of the Samoa project, research and testing were resisted. SRA achievement tests, administered to ninth grades in the years immediately preceding the project, were lost. This is a pity because they could have provided a baseline for measuring how much the project has changed student performance.

Such evidence as remains does not make possible any conclusive comparison of academic levels in 1964 with those today. Three years of SRA testing in the high schools (1970-1972) have shown no definite trend up or down. Scores on Stanford achievement tests given to the primary grades in 1972 were significantly higher than those in 1971, but more observations are needed to confirm a continuing trend. The locally-made tests seem to show a generally rising trend, but the evidence is not conclusive. There is evidence in the records of Hawaiian public schools that Samoan children, transferring to the same grade in Hawaii after different lengths of time in the new Samoa system, made better grades in proportion to the number of years they had spent in the new, as opposed to the old, Samoan education system.

In only one respect, however, has it been possible to pin down change with some confidence. This is in the standard of English usage in the schools, an important aspect of Samoan education because English is the language of instruction. Experimental evidence from the 1960's indicates that the longer pupils in any given grade had been exposed to television, the better their English performance. A study of the school on the one island that has never had television revealed conditions very much like those described by visitors to Samoan schools in 1964 -- students with little or no command of English trying to learn in a curriculum

supposed to be taught in English. On the other hand, students in that particular school who had received part of their education on one of the islands with television were doing comparatively well with the language. When the school without television was compared with isolated schools that were able to receive television, there were spectacular differences. Therefore, in this aspect of learning, at least, there is little doubt that the new system has brought about significant improvement.

The present level of performance of Samoan students, as measured by mainland standardized tests, is much like that of other second-language schools in the world where the language of instruction is not much used in the home or the society; the grade-equivalent scores are several years behind the norms of the students for whom the tests were made. However, the Samoan children are disadvantaged in taking a mainland test of this kind, both because it is in a language of which they make almost no use outside school and only very restricted use inside school, and because it is not made to fit their curriculum or their culture. Indeed, their performance is much like that of certain disadvantaged minority groups in the United States, who start behind the norms of the white majority and fall farther behind as they go through school. In comparison to mainland minority groups measured for the Coleman report, Samoan students typically do a little better in arithmetic, a

little worse in reading. Samoa is now moving toward the use of professionally made tests fitted to their own curricular objectives, which should give more valid measures of achievement.

Attitudes toward instruction by television decline sharply in the upper grades and high school, and between elementary and high school teachers. This gradient is somewhat steeper than in most systems where such attitudes have been measured, and raises the questions: (a) whether Samoa has been producing too much television (6,000 new ITV programs a year until 1971) at the cost of quality, and (b) whether after a certain number of years devoted to massive use of ITV there does not come a time when classroom teachers become able to carry more of the weight of instruction, and both teachers and pupils become a bit impatient with the mass and central control of the broadcasts. If so, at some point it becomes desirable to cut back the amount of television and use it for purposes where it can accomplish most. This is the decision Samoa has taken in cutting back and redirecting its own ITV.

The annual cost of ITV in American Samoa is about $157 per pupil, plus or minus 15 per cent. This includes capital replacement and interest. The total represents a little over one-fourth of the total average cost of

instruction per pupil. The cost is as high as it is because the television installation is very large in proportion to the relatively small number of students in the public schools (8,100), thus deriving no advantage from economies of scale.

Among the administrative and strategic aspects of the Samoa project discussed in the following pages is the decision to begin by serving all the primary grades in the first year and all high school in the second year, rather than introducing the new system one year or two years at a time. The policy may have been necessary in American Samoa, but it seems to have made for many difficulties. A significant part of the administrative history of the project is the accomplishment of turning the system almost completely over to the Samoans in nine years. It began as an imported project, planned and operated by mainlanders, just as Niger started as an imported French project. But whereas Niger remained a pilot project run by foreigners, in Samoa now the Director of Education, his deputy, most of his department heads, and practically all the principals and teachers are native-born Samoans, and mainlanders who are still in the system are in specialized or technical positions. How this was accomplished, after the project began as it did, will undoubtedly be studied very closely in the future.

ITV IN AMERICAN SAMOA -- AFTER NINE YEARS

In American Samoa the educational reform project, built around instructional television, is coming to the end of its ninth year. It is appropriate, therefore, to take stock of what has happened, and try to identify some of the lessons that have been learned.

Changes in Nine Years

The origin of the Samoan project has been described adequately in the first volume of I.I.E.P. case studies, The New Media in Action: Case Studies for Planners (UNESCO, 1967, pp. 13-15). Let us simply recall here that the project grew out of a sense of obligation and a spirit of urgency in which the Territorial Government, the Department of the Interior, and the Congress all joined. They saw it as a challenge both to American stewardship and American technology, to make up for the long neglect of education in Samoa, and by using modern technology to foreshorten the period ordinarily required for modernizing an educational system.

Since then, great changes have taken place.

Before 1964, education in American Samoa, except for Pago Pago and the church schools, was conducted mostly in one-room schools, situated in open fales, where the pupils sat on mats on the ground and chanted back the responses their teacher wanted them to learn. In 1964, new schools were rising, using modern materials but retaining many characteristics of the traditional island architecture. Now the fale schools are almost non-existent. Three new high schools have been built, to supplement Samoana, in Utelie. Elementary schools have been consolidated or rehoused in modern buildings. Education is free and universal through high school, and every child of school age in American Samoa, with the exception of a few who are physically or mentally unable, is in school.

In 1964, every top administrator in the Department of Education, almost every principal, and a number of teachers in the Samoa schools were Americans from the mainland. At the beginning of 1973, the first native Samoan Director of Education took office. His deputy, most of his department heads, almost all principals are Samoans. The Americans who remain are in specialized jobs, such as the school finance director, the acting head of tests and measurements, the supervisor of television, the chief engineer, the coordinator of ITV, and some of the teachers, many of them teaching oral English.

The television installation built in 1964 was unequalled by any other educational station in the world: six open-circuit VHF channels, two towers on a mountain, 10 videotape recorders, four studios. Three channels were operative in the autumn of 1964, and 4 classes were offered at once for the eight primary grades. In 1965, with three more channels in use, a complete high school curriculum was added. The production was enormous. Until 1971, 6,000 live instructional programs per year were being produced in those four studios. This is far more than any other educational system in the world was producing; more than Niger, Colombia, El Salvador, Hagerstown, or any of the other large ITV installations, indeed more than any of the national networks. It became possible to reduce this level of production in 1971, when more programs were recorded for later use, and in 1972 the ITV production was further cut back after it was decided that perhaps <u>too much</u> television was being sent into the schools. At the height of production, 182 programs a week were being made and broadcast. At present, only about 45 per week are being made, but 90 more are being broadcast from tapes recorded in previous years. There is also an evening service averaging five hours a night on each of two channels, and a daytime service (about 80 hours a year) for preschool groups.

In the first years of the project, every course had television -- 15 to 30 minutes per period, according to the

level. Classroom teachers were expected to follow guidance sheets that told them how to prepare the class for the television lesson, then how to "follow it up." Much of the follow-up used mimeographed exercises and questions, prepared centrally. The language structure and vocabulary of broadcasts and exercises were strictly controlled according to the Tate Syllabus, which was the guide for learning English. In other words, it was envisaged that pretty much the same kind of instructional experience would be provided in every classroom.

The situation is now somewhat different. Some classes, especially in high school, have television; some do not. Some classes have only one period a week of television, and some classes have the option of using or not using television. A great deal more responsibility is being placed upon the classroom teacher, and one result is that classrooms are no longer so uniform. An experiment in team teaching is under way. A school is being fitted to try out a number of promising innovations. Even the Tate Syllabus, which has been the pillar of the language teaching, is no longer the sole guide: two schools are using the Hawaii English Program, apparently with considerable success. Individual schools and teachers are being encouraged to try new methods and modify the system for the particular needs of their pupils. The results, which were largely unmeasured during the first five years of the program, are

now being tested regularly, and Samoans are being trained to staff an expanded tests and measurements office.

Behind these developments are some questions of importance to other prospective users of ITV, and they deserve discussion.

The Data

During the first five years of the project, quantitative measurement of student performance, if not actively resisted, was very seldom done. People were very busy, of course, and the general feeling toward testing was expressed by the architects of the project plan who said that a fair test of the new system could be made only after the first students had completed twelve years of school in it. One can hardly argue with this viewpoint so far as it applied to a final evaluation, but it was interpreted so rigidly that it eliminated pretesting of programs, short-term evaluation of alternative methods and materials, and early warning on instructional problems. Indeed, it seemed to observers that participants in the system were being asked to accept an attitude of faith rather than an experimental attitude, and the original blueprint of the project was regarded as a Bible rather than as a starting place for creating a school system to fit the needs of Samoans.

In 1962, 1963, and 1964, the SRA achievement test was given as a high school placement examination to all ninth grade students in the public schools. The summaries of these

test results have inconveniently been lost, which is a pity because they would have provided a baseline by which to measure the progress of students. Some people who saw the results in the early years of the project copied a few of the scores, and one or two of them were published in a journal of linguistics (Wallace, in Language Learning, XIV, 1965, pp. 3-4, 167-172). Therefore, there is no doubt that these tests existed, but such was the low valuation put upon quantitative measures in the early years of the project that the data were allowed to disappear.

Thus, there is really no satisfactory baseline for evaluating nine years of instruction. We have discovered summaries of the Stanford Achievement Test given to teachers in 1931-32, and to students in 1935, and of another Stanford test given students in 1954; but in those years education was not universal, and a comparison with 1972 would be meaningless. Between 1965 and 1970 there was a sporadic growth of local testing, stimulated by the appointment of a supervisor of tests and measurements in 1968 and some grant money the following year. Unfortunately, these local tests were seldom given twice in the same form and were not standardized against any particular population; therefore, they give us little help in estimating whether students were learning more or less than before, satisfactorily or unsatisfactorily according to the goals of the system. In 1970, however, the decision was made to give standardized

tests: the SRA achievement test in the upper grades and high school from 1970 through 1972 and the Stanford Achievement Test in grades 3 through 6 in 1971, and 3 through 7 in 1972. The Michigan Test of English Language Proficiency was given to all high school students during those years also. This was a courageous decision on the part of school administration in Samoa, and was occasionally regretted when results were misinterpreted. But as a result of this and some recent experimentation, we have at last a bit of hard evidence on learning in American Samoa. This evidence will be considered a little later in this report.

There have been two studies of the cost of ITV in American Samoa -- by Vaizey in 1966 and by the present writer in 1973. These also will be considered.

Finally, the examination of hard data led inevitably to identification of further policy questions that needed considering, and to research aimed at answering them. Many of these activities have been directed to the language problems of Samoan students and the fit of the system to the Samoan culture. One of the standardized tests was given partly in the native language, to find out how much the use of English depressed the scores. The present writer studied the one Samoan island that has never had television, in search of a baseline to estimate changes since 1964 in the standard of English used in the schools. A research group from the University of California at Santa Barbara is

studying some of the culture-curriculum problems. The present writer is engaged in some comparative testing with Western Samoa to try to find out some of the different effects of teaching primary school in English and in the Samoan language. Many of the instructional experiments under way are also being tested. Item analyses of tests are being used to help television teachers and curriculum planners find out what the students are learning, and what they are not. In other words, it is no longer being assumed that students will necessarily learn as much as it is hoped they would if teachers simply adhere to the original plan.

Let us now look at the available data so far as they are relevant.

THE INPUT: How Much ITV Costs

In nine years, the capital investment in Samoan ITV has been about $2.75 million, and the cumulative current costs, exclusive of capital replacement and interest, have apparently been between $10 and $11 million.

These estimates may not be entirely solid, for two reasons. In the first place, the territorial accounting system in American Samoa is not set up for cost accounting, and it is actually more nearly accurate to work from budgets than to try to use records of expenditure. In the second place, any attempt to cost one integrated component of a complex system requires many assumptions that might not be

made in precisely the same way by two different investigators. For example, television costs have to be divided between ITV and other television services; general overhead has to be allocated in some proportion to television and other educational activities; services (like making workbooks) which television teachers perform for general education, not simply for TV, must be charged in some proportion to accounts other than ITV; capital expenditures must be amortized and charged interest over different lengths of time; and so forth. All assumptions underlying the 1973 figures were discussed with financial and educational officers in Samoa, and agreements were reached on what seemed the most realistic way to handle them. Even so, it is necessary to say that the estimates finally arrived at may be 15 per cent off the true figure, on either side.

Vaizey, in 1966, estimated the current costs of television at that time as $1.423 million, including capital depreciation and notional interest. Per pupil cost for each of the 6,600 students in the public schools at that time would be $216, or about 59 cents per student hour of ITV.

In early 1973, we calculated the annual current cost of ITV, including capital depreciation and notional interest, at $1.275 million, or $157 for each of the 8,100 pupils. We did not try to calculate the cost per hour because of the uncertainty as to how many classes on how many days were

using the optional television courses.

Here are more detailed figures on annual costs of ITV and the two other television services:

	Production	Distribution	Capital Replacement	Total
School TV	$860,411	$163,100	$251,700	$1,275,211
Adult TV	390,821	51,815	108,751	551,387
Early Childhood Education TV	90,716	5,762	23,825	120,303
				$1,949,901

Why should 1973 unit costs, despite inflation, be lower than costs for 1966? For one thing, the adult service in particular, and the Early Childhood Education program to a lesser degree, have developed greatly in the intervening years, and therefore should absorb larger proportions of general television cost than before. Secondly, a number of Americans on the television payroll have been replaced by Samoans at somewhat lower salaries, and, as we have said, the load of production has been reduced. Finally, assumptions made by the different investigators in the two years are undoubtedly somewhat different. Financial officers in American Samoa, however, join in the estimate that, taking into account different ways of allocating costs, the 1973 figure of $157 per pupil is probably accurate within $25, or about 15 per cent.*

* All the assumptions and calculations behind the 1973 estimates are available in a document entitled "The costs of the television," prepared by the present writer for the Government of American Samoa.

This $157 represents a little over one-fourth of the total annual cost of public education per average pupil in American Samoa.

The lesson to be derived by future projects from these cost figures has to do with economies of scale and economies of need. American Samoa has a television installation that would serve many more schools and pupils than it does serve. It could easily serve 10 or 20 times as many. If the school audience were multiplied by 10, Vaizey figured that the unit cost would be approximately one-fifth the 1966 cost, and the present writer estimated that the 1973 cost of $157 per pupil could be reduced to between $25 and $30.

Of course, it would be impossible to serve 10 times as many pupils in American Samoa; practically every child is now in school. Even if Western Samoa were to join in the use of the television in Pago Pago -- which it is not about to do, both because its educational system is different and because of pride -- still that would not multiply the student audience by 10. The question must therefore be asked, whether the television in American Samoa was possibly over-engineered. Solutions less costly than six high-power open-circuit VHF channels could be devised to serve six or seven thousand students. The question must also be asked what return will justify making 6,000 live programs a year for 7,000 students. Needless to say, these same programs would serve 10, 20, 50 times as many students, and the unit

cost of production would decrease in proportion to the number.

It is probable that the architects of the American Samoa plan, in the expansiveness of the early 1960's, anticipated the extension of the television service beyond Samoa. In a sense, also, they were caught by the pace at which the new system was introduced. If they could have begun one grade or two grades at a time, they could have begun with a much smaller installation, experimented to see how much television was actually needed for a given course, and stored programs for use in later years. Faced with the need to serve the entire primary school system in 1964 and the entire high school system in 1965, however, they had to begin with maximum capability from the first. It was really a remarkable accomplishment to get so much production and so much transmission capability operative in such a short time.

However, even $157 per pupil per year is more than the total per student cost of education for most countries of the world, indeed, more than the average per capita income for many of them. Therefore, the Samoa example would have to be considered very carefully by the economists of any developing country that thought of imitating it. It would not seem to be economically attractive unless the school population to be served were very large. It would seem to raise economic, as well as educational, questions about how

fast a country should move into a new instructional media system, and how massive the use of the medium should be. And finally, the economic advantages of radio must seem more attractive to a developing country in light of the balance sheets from Samoa.

THE OUTPUT: Academic Achievement

We are going to separate the data on general academic achievement from other aspects of the Samoa case that might be considered output: the experiment on oral English, for example, the attitudes of students and teachers toward ITV, the administrative results and problems, and so forth. Initially, we are going to talk about the kind of data that come from the standardized tests. And the first question to ask of those data is whether student performance is improving.

The evidence on change in overall academic achievement is inconclusive. The surviving fragments of grade-equivalent scores from 1962, 1963, 1964 and 1965 are about the same as corresponding scores from SRA tests given to the ninth grade in the last three years. However, the scores are so fragmentary, and so empty of supporting information on samples, variation, and so forth, that they do not encourage comparison. The SRA achievement test has been given for three years, from 1970 through 1972, to upper grades and high schools, without any clear trend up or down. Average

scores on the Stanford Achievement Test results, grades 3 through 6 (grades 3 through 7 in the second year) were significantly higher in 1972 than in 1971. Unfortunately, two points do not make a very good curve. The local tests, when repeated in part or whole, seem to show a slightly rising trend, but the tests themselves leave something to be desired, and the trends are not clear enough to lead to conclusions.

A number of Samoan high school graduates have gone on to mainland colleges, but the results have never been gathered and studied in the necessary detail. However, Hastings, in a University of Hawaii thesis (1972), examined the records of 86 Samoan students who had transferred to the public schools of Hawaii. These students had entered the Hawaii system at different levels, and with different amounts of schooling in the new Samoan system. Comparing 31 students who had received two years or less of education in the new system with 20 who had spent two to four years in the new system, and with 35 who had spent four to six years under the new plan, he found that their cumulative grade averages in the Hawaii public schools rose steadily with the amount of time they had spent in the new system:

Group A, two years or less	2.63
Group B, two to four years	2.78
Group C, four to six years	3.14

This comparison makes no allowance for differences in ability or differences in grade level or grading practices. To harden the evidence somewhat, we have recomputed his data, limiting it to students in the same grade, who would supposedly be taking classes of corresponding difficulty. Considering only students in the ninth grade, we get these averages:

If the student had previously spent two years or less in the new Samoa system	2.174
If three or four years	2.656
If five or six years	3.109

The differences between these extreme scores are statistically significant, but it is better to regard them as suggestive than as conclusive. And in any case, the scores are nothing to be very enthusiastic about, inasmuch as a grade of A is given a numerical value of 5, B = 4, C = 3, and so forth. Therefore, students with a mimimum amount of time in the new Samoan system were averaging just a shade over D, and students with five or six years in the new system were averaging just over C. But the results provide at least a suggestion that more time in the new system, as opposed to the old one, does improve students' performance when they transfer.

Some evidence on improvement in English

Lack of competence in English had been well documented

in 1964, though not measured quantitatively. For example, Pittman, a lecturer at the University of Sydney and language consultant to the South Pacific Commission, described the kind of English he heard in the school during 1964 as "a tense-less, article-less, often plural-less pidgin English incapable of carrying any precise message." (Memorandum of January 23, 1969 to Roy D. Cobb). Wallace, a linguist who visited Samoa in early 1964, wrote an account in the journal Language Learning which described even the teachers' command of English as so weak that the Director of Education had been forced to call in an interpreter in order to communicate with one of his classroom teachers. (Language Learning, XIV, 1965, pp. 3-4, 167-172).

In 1967 and 1968, Harwood, who was the first supervisor of tests and measurements for the Samoan schools, put together some figures from tests of oral English in the schools. He compared the language performance of students at the same grade level in different schools which had begun to receive television (and, consequently, the new system) at different times. That is to say, some schools had come into the system during the first year, some the second, some the third, and so forth, as schools were gradually consolidated and the reach of television extended. Harwood analyzed some test data from the spring of 1965, and then made two studies of his own, in each case using

individual oral tests based on the Tate Syllabus.

Two of the three studies, subjected to analysis of variance, showed a significant improvement in oral English scores corresponding to the number of years the student had spent in the new system. The third, to his surprise, was a complete reversal of this result. Apparently on good evidence, he discarded these last-mentioned results as a product of interviewer error.

In an effort to supplement these findings, and in search of a baseline, the present writer tested all the children in school on the only island in American Samoa that has never had television. This is Swain's Island, about 100 miles to the north of Tutuila. Here the school looks very much as the one-room fale schools of Tutuila and Manu'a must have looked in 1963 and 1964. Elements of the new curriculum have been introduced, but never with the aid of television, and the island is so isolated that the movement of materials from and communication to and from the Department of Education has been very slow. How similar to the 1964 schools this school is, we cannot say with confidence, but we can at least say that it is closer to those pre-television schools than anything else in the Territory.

The school on Swain's Island offers six grades and has one teacher and an enrollment of 28 students. We tested each of the 20 students who were beyond the first grade

on their ability to understand spoken English, their ability to respond in English to questions and statements, and their ability to read English The tests had been developed by the Department of Education, using the Tate Syllabus and some of the Tate testing materials.

Fifteen of the 20 students had received all their education on Swain's Island; the other five had spent varying amounts of time on Tutuila, with parents or other relatives, and while there had been in new system schools. Therefore, we separated the scores of these latter students from those who had been taught only on Swain's.

Only three of the 15 who had never lived off Swain's could make any oral response whatsoever in English, although the language of instruction was supposed to be English. On the other hand, all the students who had received part of their education in Tutuila schools could speak some English, and those who had received several years of teaching in the new system could speak it pretty well. Only nine of the 15 who had studied only on Swain's Island scored higher on the test of understanding English than they could have scored purely by guessing, and only five of the 15 scored above the guessing level on reading.

Inasmuch as the second and third grade students could do little or nothing with the tests, let us combine the scores of the ten Swain's Island students who were in the fourth, fifth, and sixth grades. These were:

	Understanding spoken English (Maximum score =50)	Speaking English (Maximum score=114)	Reading English (Maximum score=32)
Ten students in 4th, 5th, 6th grades	18.5 (s.d. = 4.46)	*	4.9 (s.d. = 3.30)

But compare with these the scores of the Swain's Island students who had been educated partly on Tutuila:

	Understanding spoken English	Speaking English	Reading English
Student in grade 3 (1 year in Tutuila school)	29	9	4
Grade 3 (1 year, Tutuila)	25	19	5
Grade 4 (2 years, Tutuila)	31	14	9
Grade 5 (3 years, Tutuila)	25	44	10
Grade 6 (4 years, Tutuila)	39	97	17

In other words, the children who had been exposed to the new system were gaining year by year in command of English, as they were expected to do, whereas those who had never been exposed to the new system and its television were learning very little.

To get some perspective on the Swain's Island scores we tested two schools on Tutuila -- one small village school

* Only three could make any response. Their mean score was 10.

very nearly as isolated as Swain's but close enough to have received instructional television for the last five years, and a somewhat larger village school which had received television from the beginning of the project. In the first of these schools (Asu), there were only four grades. We tested the second, third, and fourth graders. The other school (Lauli'i) had six grades; we tested third and sixth graders only. Here are their scores, for comparison with those from Swain's Island:

	Understanding spoken English (Maximum = 50)	Speaking English (Maximum = 114)	Reading English (Maximum = 32)
[for reference: Swain's, grades 4, 5, 6, N = 10]	[18.5]	[*]	[4.9]
Asu, grades 2 & 3 (N = 5)	24.2	41.8	8.3
Asu, grade 4 (N = 8)	32.4 (s.d.=9.15)	61.1 (s.d.=9.58)	10.6 (s.d.=2.80)
Lauli'i, grade 3 (N = 14)	32.6 (s.d.=4.28)	69.6 (s.d.=15.30)	12.0 (s.d.=4.52)
Lauli'i, grade 6 (N = 15)	42.1 (s.d.=2.28)	102.7 (s.d.=12.07)	21.9 (s.d.=4.12)

In the light of these results, there can be little doubt that the new system and instructional television are making a noteworthy, even a spectacular, difference in the standard of English in the Samoan classrooms.

---

* Only three could make any response. Their mean score was 10.

What is the present level of academic achievement?

Despite these figures on English usage, when we look at the results of the standardized tests, in grade-equivalent scores, we are likely to be disappointed. That reaction must be resisted, because it does not take into consideration the situation.

Here are some examples of the test data. On the following pages are (a) summary scores in grade-equivalents for the Stanford tests given to the public schools and to the private church schools on the island, and (b) average gains per year, in grade equivalents, figured in two ways -- average difference between scores by grades in the same year, and average gains by the same class from one year to the next.

It is clear that the elementary school scores are lower than they would be expected to be in schools on the mainland, and that pupils are gaining, on the average, half a grade per year, rather than the expected grade. Or at least that is how they score on these tests. On the other hand, they are doing quite as well as the private schools, where most of the teachers are Americans and where there has been a tradition of high standards.

On page 24 are corresponding scores, on the SRA test, for high schools.

SAT	Word Meaning	Paragraph Meaning	Vocabulary	Spelling	Word Study Skills	Language	Arithmetic	Arith. Comp.	Arith. Concepts	Science and Social Studies	N
Public Schools - 1972											
All third grade	2.11	2.00	2.02	2.53	2.26*	-	2.40*	-	-	-	767
All fourth grade	2.56	2.27	2.05*	2.83	2.85	-	2.60*	-	-	-	855
All fifth grade*	2.55	2.71	-	3.57	2.41°	3.33	-	5.04	3.55	3.27	724
All sixth grade*	2.95	3.21	-	4.30	2.94	3.46	-	5.67	4.20	3.32	664
All seventh grade	3.05	3.41	-	4.56	2.92	3.59	-	6.00	4.51	3.54	405
Private Schools - 1972											
All third grade	2.00	1.89	1.68	2.24	1.89	-	2.14	-	-	-	150
All fourth grade	2.27	2.07	2.08	2.87	2.70	-	2.44				142
All fifth grade	2.57	2.76	-	4.15	2.79	3.26	-	4.60	3.61	2.52	152
All sixth grade	3.08	3.09	-	4.06	3.16	3.53	-	5.32	3.72	3.22	125

*doesn't include Fia Iloa
°doesn't include Leatele

SAT
Elementary Public Schools
Gains per year

	Word Meaning	Paragraph Meaning	Vocabulary	Spelling	Word Study Skills	Language	Arithmetic	Arith. Comp.	Arith. Concepts	Science and Social Studies
Average gain per year, 1972	0.2	0.4	-	0.5	0.2	0.1	0.2	0.5	0.5	0.1
Average gain same class 3rd in 1971, 4th in 1972	0.8	0.6	0.7	0.7	1.0	-	0.4	-	-	-
4th in '71, 5th in '72	0.4	0.6	-	1.1	-	-	-	-	-	-
5th in '71, 6th in '72	0.4	0.5	-	0.7	0.2	0.4	-	0.7	0.6	0.1
6th in '71, 7th in '72	0.3	0.4	-	0.8	0.1	0.4	-	0.5	0.7	0.1
Average	0.5	0.5	-	0.8	0.4	0.4	-	0.6	0.7	0.1

SRA March, 1972

	Social Studies	Science	Language Arts	Arithmetic	Reading	Composite	N
All Public High Schools							
9th grade	5.0	5.5	5.4	6.6	4.3	5.4	624
10th "	5.7	5.9	6.1	7.0	4.8	5.9	512
11th "	5.9	6.4	6.4	6.9	5.5	6.2	405
12th "	6.5	6.8	7.3	7.7	5.8	6.8	343
Average gain per year	0.5	0.4	0.6	0.4	0.5	0.5	
All Private High Schools							
9th grade	5.4	5.8	6.1	6.6	5.1	5.8	116
10th "	6.4	6.4	7.3	7.5	6.2	6.8	112
11th "	6.7	6.7	7.7	7.8	6.6	7.2	102
12th "	6.6	6.7	7.8	7.5	6.3	7.1	54*

*One school only

Here, too, the grade-equivalents are lower than we should expect of mainland students. The public school students are not scoring quite so well as are the private schools. Some selection has taken place between primary and secondary; a number of the most promising students have been taken out of public school and sent to one of the church schools. It should be explained that the weakest of the private schools is the only one for which we have twelfth grade scores in 1972; if the others were in the group, the twelfth grade scores would be higher.

The high school students, like the primary students, seem to gain about half a grade-equivalent per year. In this connection, however, it will be interesting to look at the scores for Fia Iloa, which has been the elite public school of American Samoa. Students ordinarily come into this school with ability to speak English, whereas the average Samoan student in other schools usually can speak not a word of English when he enters, although beginning in the third year he is taught almost entirely in English. Skill in the use of English is doubtless not the only source of difference between Fia Iloa and the other schools, but the following table shows that Fia Iloa students do gain approximately a grade a year, as they are expected to. Therefore, the expected level of achievement is quite possible for a Samoan child, and language ability must have something to do with the actual scores.

SAT	Word Meaning	Paragraph Meaning	Vocabulary	Spelling	Word Study Skills	Language	Arithmetic	Arith. Comp.	Arith. Concepts	Science and Social Studies	N
Fia Iloa (1971)											
3rd grade	1.98	2.05	2.27	1.94	2.47		2.10				47
4th "	2.85	2.94	3.40	3.04	4.11		2.82				48
5th "	3.78	3.95		4.13	4.65	3.78		3.83	3.99	3.98	43
6th "	4.61	4.93		5.07	5.72	4.88		5.11	4.93	4.79	36
Fia Iloa (1972)											
Grade 1 (pri 1)	1.76	1.81	1.96	1.96	2.05		2.00				46
Grade 2 (pri 1)	2.78	3.01	3.34	2.91	4.33		2.80				56
Grade 3 (pri 2)	3.72	3.61		4.17	5.00	3.70		3.73	3.71	3.79	47
Grade 4 (pri 2)	4.41	4.62		5.00	5.31	4.61		4.68	4.70	4.50	44

So, at this point in the development of the Samoa project, the average Samoan pupil is below grade-equivalent in the mainland, and is gaining in the neighborhood of half a grade, rather than a full grade, per year. On the other hand, some Samoan children, who come to school able to speak English, are gaining a full grade a year. It should be noted, for further reference, that the weakest subject is usually reading, the strongest subject mathematical computation, and that on tests requiring mostly rote memory they usually do considerably better (in comparison to the mainland norm) than on tests requiring reasoning or other higher cognitive skills. For example, compare arithmetical computation with arithmetical concepts, or spelling with reading.

How well should they be expected to do?

With these figures, however, we have not answered the important question: whether the Samoan children are performing up to expectation, and whether it is valid to compare them on such tests, in grade equivalents, with mainland students.

The standardized tests are in English, a foreign language to almost all the students in Samoa. It is a language they use little, if at all, outside their school hours. They are actively discouraged from using it at home. Their long vacations are vacations from English

as well as from school. They spend the intellectually active years from six through 12 communicating with their teachers in a very primitive and restrictive version of this foreign language, and they take tests that were made for students who have spoken the language of the test from their first word.

Furthermore, these tests are made to fit an average mainland curriculum, not the Samoan curriculum, and to fit the mainland culture and environment, rather than the Samoan culture and environment. The educators in Samoa have tried conscientiously to fit a curriculum to the Samoan culture. They have noted a number of test items in which the Samoan students have been puzzled by the examples used: trains, for example, which no Samoan child has ever seen; and a question on what clothes to wear for different temperatures, whereas the Samoan child seldom experiences a temperature below 75° and has no concept of what one should wear at 32° or 50°.

There is also a special problem of ceiling effect in these standardized tests. Because of the variability in language in the typical Samoan classroom, a lower form of the test is commonly used than would be appropriate for a particular grade, so that even the poorer students can read the questions. This handicaps the better students, who find themselves achieving about as much as they could on that test, but not as much as they could on a harder test.

But this is not to say that the standardized tests are not reliable, or that they are not valid as a measure of what the Samoan children could be expected to achieve if transported suddenly to a mainland school, or as a general measure of achievement apart from the objectives of the Samoan curriculum. A number of comparative scores, and the performance of Samoan students on tests required for entrance to mainland colleges, support these conclusions.* But we do not think the tests are fully valid as a measure of achievement in the Samoan curriculum. The only way to get valid and reliable measures of that kind is by making professional quality local criterion-referenced tests based on the objectives of the Samoan curriculum. This is what the Samoan Department of Education is now beginning to do. They will have system-wide tests in two subjects this year, two more next year. When these are available, it will be possible to speak with more confidence about the achievement of the Samoan students.

We feel that it is highly questionable, both because of the language problem and the curricular and cultural differences, to compare Samoan children with average mainland children on the basis of grade-equivalents scored on mainland standardized tests. It would be fairer to compare them with so-called disadvantaged groups on the mainland,

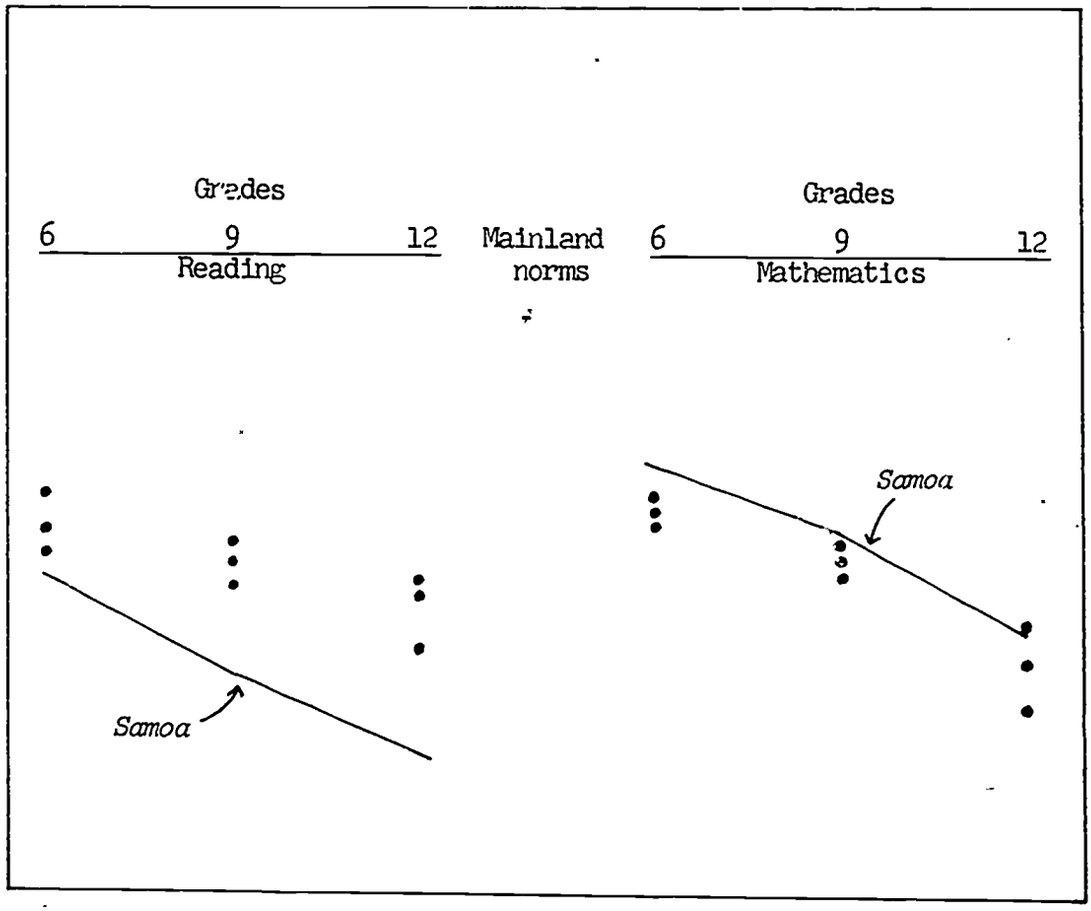
*Only a small percentage of Samoan high school students reach the minimum score, on the Michigan Test of English Language Proficiency, required for entrance to mainland colleges. Their scores on the MTELP are a bit better than the Trust Territories, but their general achievement scores are lower than Guam's, where much more English is spoken in the home and society.

particularly those groups where a language other than English is spoken in the home, or with groups in other developing countries that are being taught in foreign languages. According to Donald Leton, of the University of Hawaii, "in various school systems throughout the world where the language of instruction is a second language, e.g., Ireland, Philippines, India, and other countries in S. E. Asia and Africa, the average eighth grade student is about three years retarded in academic achievement." The situation in Samoa is not the kind of second-language situation represented, for example, by Montreal and Quebec, where the two languages are used and practiced side by side, and where reading material is plentiful in both languages. It is not even completely like the situation of disadvantaged minority groups on the American mainland -- Blacks, Puerto Ricans, Mexican Americans, American Indians, and others -- because those groups live surrounded by English and by mainland culture. They have incomparably more opportunity to practice the language, learn the culture, and study the curriculum for which the tests were made. Yet, the Coleman report shows that these minority groups in the 650,000 sample started school behind the white majority and fell farther behind the farther they went in school. Their scores on the Coleman tests averaged one standard deviation or a bit more behind the majority average. This translates into several grade-years -- two or more at the end of the

sixth grade, three or more in the ninth grade, four or more in the twelfth. Furthermore, if the students had no English reading material at home (as the Samoans do not) or if their parents continued to speak a non-English language (as Samoan parents do), those circumstances correlated more and more closely with their achievement scores as they went into the higher grades.

How do the Samoan children compare with these groups? Like the second-language students Leton mentioned, they tend to be about three grades behind the norm when they are in the eighth grade. They do a little worse than a number of Coleman's minority groups in reading, a little better in arithmetic. See the chart on the following page.

There is another disturbing fact that must be considered when interpreting the test performance of these Samoan students. As we have noted, they are spending some of the most intellectually active years of their lives, years when their life spaces are supposed to be filling up and when they are supposed to be learning cognitive skills, using what someone unkindly called a "foreign baby talk" with classroom teachers whose ability to speak English is not much better than theirs. This is in the very classroom which is chiefly depended upon to fill up their heads and teach them intellectual skills. They are learning to read and write in a new language that has little relation to



Comparison of American Samoa scores on U.S. standardized tests, in terms of grade levels below mainland norms, with that of three "disadvantaged" groups on the mainland. The dots represent the special groups; the line represents Samoa average public school scores in 6th, 9th, and 12th grades.

the life they live outside school and before they develop much verbal ability in their own language. What does it do to the intellectual development of a child to put him through an experience of this kind? Might it not be expected that his best work would be in subjects requiring much rote learning and his poorest work in subjects requiring higher cognitive skills? This has bothered a number of people who have thought about the Samoan system and is the reason that we have undertaken to do some comparative testing with Western Samoa.

The Western Samoa schools teach the first seven years in the Samoan language. During this period, English is studied as a foreign language, then becomes the language of instruction in the eighth year. We have repeated in the ninth grade within American Samoa a special test of computation and reasoning in arithmetic, and a California reading test not previously used in American Samoa. The purpose was not to compare the systems but to find out whether the difference between performance on rote questions and on questions requiring higher cognitive skills was the same in a system where the child is taught during the intellectually active years of primary school in his own language. We also wanted to find what is the effect on skill in reading English two years after the changeover. The purpose, therefore, is not to compare the systems but to

gain some information by item and group analysis on some of the differential effects of these two language strategies. Unfortunately, because field work sometimes operates under uncertainties, the Western Samoa results were unaccountably thrown away before they could be used for comparison, and we shall have to wait until autumn of 1973 to get the necessary data. It promises to be most interesting.

Our conclusion is that, given the circumstances under which Samoan students learn, they are doing pretty well, and certainly not poorly enough to make anyone ashamed of their new educational system.

Rather, the lesson to derive from what we know of the academic achievements of the Samoan children is that any developing country contemplating an intensive educational reform like Samoa's must consider how much it can expect of its students; perhaps, given the conditions of learning, they should have longer to reach a given standard. More important: a good deal of thought should be given to what the country wants its children to learn. The standardized tests used in Samoa measure general academic skills, such as provide a foundation for college work, although very few Samoans ever go to a mainland college. Perhaps a developing country needs less of these academic skills, more of the practical and specific skills involved in a job or in homemaking. And

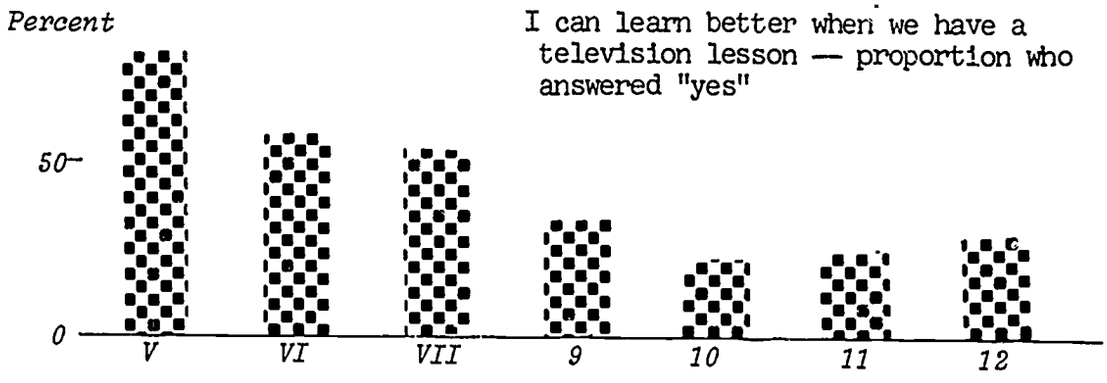
finally, a country undertaking an extensive and intensive program of educational reform must consider most carefully the language strategy of the program. If a second language is to be used as the main vehicle of instruction in the upper grades, at what point can it most efficiently be made the language of instruction? How much start should the pupil be given in his own language before he begins learning in English or French or some other language foreign to his life? These answers are obviously not easy.

OUTPUT: Attitudes Toward the Television

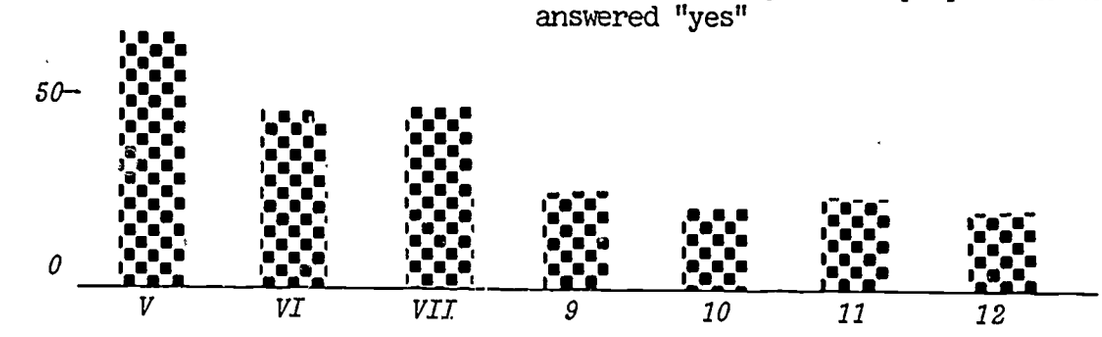
In March of 1972, as a part of a review of television policy, all students in levels V, VI, and VII (corresponding to grades 5 through 8) of elementary school, all students in the four high school classes, all classroom teachers and a number of administrators in the public school system of American Samoa were asked a number of questions regarding their attitudes toward the use of ITV in the new system.

The result in general was to reveal a sharp gradient of decreasing favorableness toward ITV from the elementary grades through high school. Perhaps the best way to illustrate this is by means of the following chart.

STUDENTS

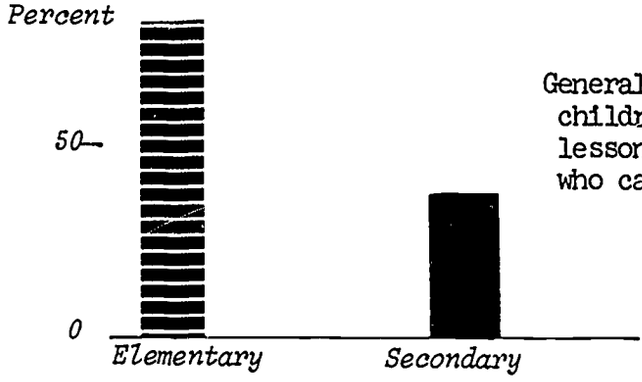


I can learn better when we have a television lesson — proportion who answered "yes"

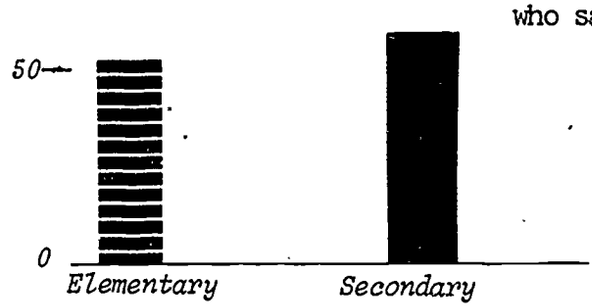


Do you want to have television lessons in school next year? — proportion who answered "yes"

TEACHERS



Generally speaking, how well do you think children have learned from the television lessons presented this year? — proportion who called learning "excellent" or "good"



Television is used too much — proportion who said they "agree" or "strongly agree"

What the chart says pictorially, we can illustrate also by specific questions:

Student Attitudes

Level	V	VI	VII	Grade	9	10	11	12
I can learn better when we have a television lesson — proportion who agreed with this	70.6%	50.8%	46.4%		29.6%	19.7%	21.3%	23.5%
Do you want to have television lessons in school next year? -- proportion who say "yes"	66.0%	48.5%	48.4%		25.6%	20.5%	24.8%	21.8%
I like television better in school than at night — proprotion who say they do	68.6%	65.6%	59.2%		36.7%	21.0%	17.0%	16.0%

Teacher Attitudes

	Elementary	Secondary
Generally speaking, how well do you think children have learned from the television lessons presented this year? — proportion who said learning was "excellent" or "good"	80.6%	37.5%
Television is used too much — proportion who said they agree or strongly agree	53.6%	68.8%
Generally speaking, how much have the television lessons helped you in your work this year? — proportion who said very much or quite a lot	70.6%	29.0%

This kind of gradient is not uncommon.* Wherever attitudes toward ITV have been measured, teachers and students in higher grades are less favorable than elementary teachers and students. In general, as we all know, high school students tend to grouse more than those in primary grades, college students more than those in high school. This particular gradient, however, is steeper than most. For the sake of illustration, let us compare it with some figures from El Salvador:

American Samoa - Level	VI	VII	Grade 9
Proportion who agree they learn more with television	50.8%	46.4%	29.6%

El Salvador - Grade	7	8	9
Proportion who agree they learn more with television	84%	76%	76%

Students were asked few detailed questions that would help us analyze the source of their discontent. Teachers, however, were asked a number of detailed questions, some of which are reproduced on the next page.

There are some interesting points of agreement between elementary and secondary teachers in these answers. Both groups tend to think TV teachers do not visit schools often enough; both groups agree that lesson materials often

* For example, see the Roper studies of attitudes toward ITV in American schools during the late 1950's.

	Teachers	
	Elementary	Secondary
Many students do not understand television lessons.	33.1%	49.0%
TV teachers do not visit schools enough.	63.6	66.7
Lesson materials for TV courses are generally poor.	19.7	33.3
Lesson materials often do not reach the schools on time.	69.4	60.8
TV teachers do not pay attention to feedback.	52.5	43.3
Production of TV lessons is generally poor.	26.7	37.2
TV teachers do not provide enough printed materials for their courses.	32.6	37.2
Students are just plain bored with television.	37.0	53.0
Television teachers do not know the level of understanding of the students they are teaching.	63.8	60.8
Classroom teachers are not given enough freedom to use their own ideas in teaching.	53.5	56.8
The level of course instruction is too difficult.	40.3	19.6
The audio (sound) on television lessons is poor.	42.6	62.7
Classroom teachers should be given complete freedom to decide whether or not to use TV.	50.9	68.8
The level of course instruction is too easy.	26.1	37.2
More lower-level elementary courses should be taught in the Samoan language.	54.0	37.5

reach the schools late; the majority of both groups agree that television teachers often do not know the level of the students they are teaching; and both agree that the television lessons do not give the teacher enough freedom to use his own ideas in teaching and to decide when and whether to use television. This latter statement, however, strikes a resonant chord in a much larger proportion of high school teachers than elementary teachers. High school teachers are much more likely than elementary teachers to report also that their students are "just plain bored" with television, and to be critical of the lesson materials, the production, and the quality of the broadcast sound. And recalling the complaint about television teachers not understanding the level of the students they are teaching, it is interesting to note that a third of the elementary teachers and half of the high school teachers report that many students do not understand the ITV lessons, 40 per cent of the elementary teachers find the lessons too difficult, and 37 per cent of the high school teachers find them too easy.

How shall we interpret these attitudes? As we have said, it is not uncommon to find both teachers and students less satisfied with instructional television -- especially massive doses of instructional television -- in higher levels of the school system. The teachers at those levels usually have more training; they are impatient at not

being able to use it. Students are more anxious to discuss and ask questions and impatient at having their study tasks and schedules specified for them. We are inclined to think that the basic constellation of attitudes probably revolves around the question of central control versus local control of classroom time. In the early grades, where the teachers really need help, especially in teaching English, they are less inclined to be rebellious. It is not surprising that elementary teachers vote by a large margin that language arts is their most useful ITV program or that secondary teachers should find social studies and science most helpful because those lessons provide the visual materials they would have a very hard time otherwise bringing into their classrooms.

But the attitudes revealed by this study also raise certain questions about strategies of ITV use, which deserve to be discussed by themselves.

Instructional Television Strategies

It has been suggested by people working in television, as well as by classroom teachers and administrators, that perhaps American Samoa has too much television -- or had too much before the recent cutback. This is bound to be a problem where ITV is used as massively as it is in one of the educational reform projects such as Samoa, El Salvador, Niger, and the Ivory Coast.

A television teacher in Samoa who taught for a year in the classroom said frankly that the programs came on relentlessly, one after another, all day, often leaving too little time to develop a subject begun on television, or to do what a teacher is taught to do above all else: meet the individual learning needs of real, live children. Again and again, before she was well into this job, this teacher said she would have to give it up and turn to the next program. It is easy to believe that this frustration might be greater the more experienced the teacher, the greater his pride of position, the higher his level of teaching.

Furthermore, it is at least worth considering whether after a certain number of years of massive ITV this kind of frustration does not considerably increase. If the reform is really doing its job, the teachers in the classroom are no longer the same kind of teachers with which the reform began. They have improved, both because of what they learn from the television teaching and from inservice training. They become more competent in the new curriculum. They no longer want to be treated as monitors and told precisely what to do. Television is no longer so essential as at first.

For the students, the glamour rubs off television. Something like this seems to be happening in El Salvador as well as Samoa. In El Salvador, teacher attitudes toward

ITV have become steadily less favorable since the first year, and students who come into the first year of television with a rosy glow of expectation have lost much of the glow by the third year.

When this happens, it would seem desirable to reconsider the strategy of the use of television. At the beginning, it calls for massive use in order to introduce the new methods and curricula, to prop up the teachers, to encourage and help bring about the other changes (like curriculum revision, new classroom materials, and teacher inservice training) that are part of the reform. As time goes on, would it not possibly be desirable to shift gradually from massive use -- use for everything -- to specific uses where ITV can be most effectively. This is apparently what the Samoan teachers were asking for when they were given a choice of different plans for using ITV in the four main subject matter areas. Because of the importance of these strategic choices we are going to summarize their answers to this question.

They were asked to choose which of four plans for using television they would prefer in each class. The plans were:

Plan A -- TV should present and develop the main parts of the course. (This means using TV in about the same way it had been used before.)

Plan B -- TV should only introduce basic skills, concepts and information with the development left up to the classroom teacher. (This would mean using TV less in most courses.)

Plan C — TV should only be used to add enrichment (non-essential parts) to a course. It should not introduce basic skills, concepts, and information. (This, like Plan B, would mean using TV less in most courses.)

Plan D — TV should not be used at all in the particular subject.

An alternative was provided also -- TV should be used in some other way than those mentioned. Very few teachers stated such an alternative.

Here are the results:

Teacher preferences for different ways of using ITV

	Elementary	Secondary
Language Arts		
Plan A	58.1%	
Plan B	26.9	not applicable
Plan C	7.3	
Plan D	5.4	
Mathematics		
Plan A	58.1%	18.4%
Plan B	26.7	28.6
Plan C	7.4	24.4
Plan D	6.6	28.6
Social Studies		
Plan A	55.6%	24.5%
Plan B	27.4	22.4
Plan C	8.5	42.9
Plan D	7.3	6.1
Science		
Plan A	57.6%	22.4%
Plan B	30.3	32.7
Plan C	6.6	20.4
Plan D	4.3	20.4

These are extremely interesting answers. Notice one thing carefully. In view of the general unfavorable attitudes of high school teachers, we might expect them to opt for Plan D -- no television -- but they do not. Overall, as many want television to continue as it is at present as want it eliminated. Chiefly, they want it cut back (in science and mathematics), to leave more time for the classroom teacher to teach, or they want it used to enrich the course with demonstrations and visual film clips (as in social studies). The elementary teachers overwhelmingly want it continued as at present, perhaps because they need it more than the high school teachers. Most of the elementary teachers who do not want it to continue unchanged would simply like to see it cut back to allow more time for teaching in the classroom.

This is the direction in which American Samoa has been moving for a year. It has left most of the elementary courses unchanged, except to cut back the amount of television in some of them, has eliminated television entirely from a few high school classes, cut back others, and in some is offering one period a week of enrichment, supposedly determined in consultation with the classroom teachers of the subject.

The result of this change in strategy will become more evident when a second attitude study is made in the

spring of 1973 and when achievement tests are given in the next school year. But it suggests certain lessons to be learned from the Samoa experience. A developing country or school system contemplating the massive use of ITV would be well advised to consider at least three questions:

1) Is television, used massively for educational reform, a kind of unstable chemical whose effectiveness decays at a certain rate, after which it must be used less massively and more selectively?

2) Is there a limit on how much ITV can be used before the size of the operation becomes counterproductive?

3) As the project develops, what signs should become visible that the time has come to revise the strategy, from massive and general use to specific and differentiated use, from major dependence on central teaching to greater dependence on classroom teaching, and for what subjects and at what levels?

Still another strategic question is suggested by the Samoa experience: How fast should a developing country or system move into ITV?

Most of the countries and systems that have used ITV massively have begun a grade at a time. This is what Niger

and El Salvador did. In the first year they tested out the first grade programs on a limited number of classes, then revised such lessons as seemed to need it and offered them to an expanded group of first grade classrooms the second year. Also in the second year they tried out programs for the next higher grade on a limited number of classes, then revised and offered them widely the next year. And so on throughout the grades they intended to cover. This required them for any one year to make only one year of classes for one grade, in addition to revising some of the recorded programs from the previous year. It allowed them, each year after the first one, to teach students who had a foundation in the new curriculum and new methods and had reached a known level. And after programs for one year had been revised, then they could be broadcast for several succeeding years as recorded, rather than making live programs.

Samoa did not do that. It introduced television in eight grades the first year, 12 grades the second. There were doubtless good reasons in 1964 for doing this, but it led to grievous complication.

It was infeasible to begin the new curriculum at eight different grade levels all at the same time. They taught the elementary school in three levels. Gradually, throughout the next eight years, they expanded the number of levels, and in 1974, for the first time, there will be

eight primary grades. It was not entirely a good idea to have more than one grade group in a single level; the tests show that almost invariably children learned less in the second year at the same level than in the first year.

But it brought worse complications because the changing number of levels made it almost impossible to record programs and use them again the following year. The levels and the starting points of the pupils in them were changing, or thought to be changing, every year. The result was that almost every ITV program had to be made over and broadcast live every year.

In the late 1960's, 182 teaching programs were being produced every week in American Samoa -- 6,000 a year. This put an intolerable burden upon teleteachers and producers. In the first year of the project, some teachers made 20 programs a week. Later, the average was cut to 10; recently, still lower. Obviously the early amount of production would hardly contribute to the high quality of ITV. Many dedicated and talented people worked in Samoan television, but when a teacher has to make 10 or more programs a week, in addition to writing classroom materials, those ITV programs are not going to win any prizes. And the quality of the programs was probably a factor in creating the kind of attitudes revealed by the 1972 survey.

On the basis of the Samoa experience, any country or system introducing television would be well advised to

move into it at a careful and measured pace. A grade at a time, or even a few courses at a time, would seem to be better than to try to blanket the whole system. The more the curriculum and the methods of instruction are to be changed, and the more the standards of achievement are intended to be raised, the more reason to move slowly.

Some Administrative Considerations

This is not the place to review and analyze the administrative history of the Samoa project. That will be done adequately only when a definitive history is written. Yet, some problems and accomplishments are worth mentioning here if only to suggest what will be available for study when the definitive analysis is made.

Samoa is a classical illustration of a principle that seems to apply to all cases when television is introduced on a large scale into an educational system: the importance of strong support and leadership high in the establishment. Without the strong and active support of Governor H. Rex Lee, it is hard to conceive that ITV could have come to American Samoa at all. He was the project's advocate to the Department of the Interior and to Congress. He brought in the NAEB consultants to make the project plan, and other educators to review it. He persuaded the federal government to put up the money for the remarkable television installation. He brushed aside resistance from mainland educators within

the system, saw the project through its early administrative storms, gave the Director of Education and the ITV leaders and advisers the backing they needed to make wide and swift changes in the system. When Governor Lee left, the wolves felt freer to attack, and ITV was blown in the winds of politics and personal ill-feeling -- a story that need not be told here. But as long as he was there, there was no doubt anywhere in the government that it was our project, not their project, and that it would be supported.

The Samoa experience fits with the experience of comparable projects. In El Salvador, the strong support and leadership of Lic. Walter Beneke, Minister of Education, put the establishment firmly behind the educational reform and its ITV. In the Ivory Coast, the personal concern of President Houphoët-Boigny moved educational reform and ITV past administrative and political roadblocks. In Niger, on the other hand, except for some initial interest expressed by the President, there has been nothing but disinterest or active hostility on the part of most of the educational establishment. There was no one to be the project's national advocate and to bring it into the country's plans. Despite the quality of the project itself, it remained always an experimental project, a French project in an African country, and even after eight years it is still not really incorporated into the educational system of Niger.

The differences in results have been dramatic. In Samoa, the system is universal, and every child is studying within it, despite two changes in the governorship and four changes in the directorship of Education. In El Salvador, despite a change in the national government and two changes in ministers, free and universal education, ITV and the new curriculum, have been extended throughout the entire Plan Basico; they are now being introduced into primary school and television is being extended to adult education. In the Ivory Coast, the project is moving smoothly through its planned expansion, and will soon be the largest of the four national projects. But in Niger, television and educational reform still reach only 20 classrooms. A total of only 800 students have moved through it.

However, when the administrative history is written, it will be necessary to consider also the conditions under which strong leadership contributes to rigidity of program. There have been signs of this in Samoa. There was a refusal to test. There was an almost religious insistence on the inviolability of the original plan and of the methods chosen. Whether an experimental attitude at the beginning would have made for any better results is impossible to prove now. It may have been that what was done was the only way to accomplish such great changes so quickly. But it is doubtful that any planner can be

absolutely confident, at the beginning, that he is recommending in every respect the best plan. When the plan is intended for a foreign culture, he must be even more doubtful. The Samoa plan was a brilliant one. It was made with every intention to fit and serve the Samoan culture, and yet essentially it represented the best experience of mainland schools with ITV up to that time. Many observers have wondered whether a more experimental approach -- trying and testing -- a greater willingness to alter the plan and try out different methods, might have led the project, after its initial phase, into smoother waters and perhaps to more efficient learning. This is the other side of the coin of strong administrative support and leadership: the need to establish some balance between executive firmness and administrative flexibility.

Of all the chapters in the administrative history of Samoa's ITV, perhaps the most interesting one to future historians will be the story of the return of leadership to Samoans. El Salvador had no such problem as this. From the first, it was a Salvadoran project. Financial assistance and advisors came from outside the country, but Salvadorans were always in charge of the project. It was a part of the Salvadoran educational system; all the executive decisions were in the hands of Salvadorans; the ITV was controlled and operated entirely by Salvadorans.

Niger, on the other hand, as we have said, was an imported project run by imported experts with almost no high-level participation by educators from Niger. Consequently, El Salvador always had its own project; Niger always had a French experimental project. Both procedures made for certain problems. El Salvador had difficulties preparing skilled people and maintaining quality of product, but there was never any question as to whose project it was or whether it would continue. Niger had very skillful people working on the curriculum and the television, and maintained a very high standard of product, but it was "their" project, not ours. The problem of accomplishing the takeover of the project and incorporating it into the active development of education in Niger has so far defied solution. In general, therefore, the conclusion has usually been stated that if a large ITV or educational reform project is to have a real impact on a developing country, it is better, even at the cost of some quality and some efficiency, to place it from the start completely under the control of the host country.

The experience of Samoa simply points out that such a conclusion is far from a law. The Samoa project began, almost as much as Niger, as an import. The plan was made by people other than Samoans. The operation was run by experts other than Samoans. The Director of Education, until the beginning of 1973, was a non-Samoan. Yet, as

we said at the beginning of this paper, the Director of Education, his deputy and chief department heads, all except one or two of his principals and a few teachers, are now native-born Samoans. A Samoan Board of Regents oversees the educational system. In other words, Samoa has not duplicated the history of Niger; it has turned the story around, and the system has been taken over by the people of Samoa. Therefore, there are alternatives to the two general strategies represented by El Salvador and Niger.

We are going to resist the temptation to try to say at this time just how the changes occurred in Samoa, and, of course, we do not yet know what their effect will be. As of this writing, the first Samoan Director of Education has been in office less than three months. The change was not accomplished all at once. During the years, a number of Samoans have come back from advanced training and moved into important positions in education. The currents toward Samoan control have been flowing in general island administration as well as in education, and a Samoan governor will probably be elected in 1974 or 1976. But the significant changes in large part have taken place in the last two years and appear to have been related both to the emergence of competent Samoan department heads and to the attitudes of the last American Director of Education and the present Governor of American

Samoa, both of whom felt that the time was at hand to put Samoan matters in Samoan control. This is too simple an explanation, of course. But we are speaking of one of the truly interesting and remarkable features of the Samoan ITV experience. The account of how the changes were brought about will probably be one of the most fascinating and most closely examined parts of the project history when it is finally written.