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ABSTRACT

An innovative, entertaining television series, "The Electric Company" (TEC), was designed by Children's Television Workshop to help teach basic reading skills to seven-to-ten year olds either at home or in school. This report discusses two in-school audience surveys of TEC utilization--a Fall 1971 survey of elementary school principals which provides national estimates of utilization levels by different types of schools and pupils, and a Spring 1972 survey of teachers who were using TEC which provides data on the conditions under which pupils were actually viewing the program. Major findings of the fall survey are presented, emphasizing the good penetration of TEC into urbanized and low income areas in the North Atlantic and West-Southwest regions and among pupils who need it most. Findings of the nationwide teacher survey are discussed at length and are detailed in an appendix. Also appended are the fall questionnaire, tables presenting fall findings, the spring questionnaire, and a technical report of the surveys. (SH)

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Center for the Study of Education
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In Conjunction With

Statistics Research Division
Research Triangle Institute

"THE ELECTRIC COMPANY" IN-SCHOOL UTILIZATION STUDY

VOL. 1: THE 1971-72 SCHOOL AND TEACHER SURVEYS

Robert E. Herriott and Roland J. Liebert

August 15, 1972

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1.0 INTRODUCTION

On October 25, 1971, the Children's Television Workshop aired the first show of its new television series, "The Electric Company" (TEC). Using an innovative, entertaining format, the series' principal objective was to help teach basic reading skills to seven-to-ten year olds. It was designed to appeal to a nationwide in-home audience, as well as for use in classrooms as a resource for teachers of reading. The Workshop was primarily interested in reaching children while they are in school, where teachers could facilitate and reinforce the objectives of the series. Within this potential audience, the Workshop identified a narrower target group of poor readers in the second grade.

This report discusses two in-school audience surveys of TEC utilization. The Fall 1971 survey of elementary school principals provides national estimates of utilization levels by different types of schools and pupils. The Spring 1972 survey of teachers who were using TEC provides data on the conditions under which pupils were actually viewing TEC. Both surveys provide data on how schools and teachers first heard of TEC, why they decided to either adopt or not adopt the series, and how the adopters adjusted classroom activities to facilitate viewing.

The surveys were designed by Dr. Robert E. Herriott of Florida State University and conducted by the Statistics Research Division of the Research Triangle Institute in North Carolina. Funds for the surveys were provided by the Children's Television Workshop. This report was prepared by Dr. Herriott and Dr. Roland J. Liebert of Florida State

University, with a technical appendix on sampling procedures by Dr. Robert E. Mason of the Research Triangle Institute.

2.0 SUMMARY: THE SUCCESS OF "THE ELECTRIC COMPANY"

Most innovations in education are exceedingly slow to penetrate school systems. By one authoritative account, it generally takes decades for more than a fraction of schools to adopt new educational methods.[1] Moreover, the first institutions to innovate have historically been the wealthier, "elite" schools.[2] The quickening pace of technological change, the increasing availability of appealing and sophisticated instructional materials, and the growing interest in the improvement of school performance may well have changed all of this. Exemplifying these newer developments, "The Electric Company" (TEC) has recorded a remarkable advancement over previous trends in school innovativeness. If only in terms of the speed and scope of penetration of elementary schools of all kinds, TEC must be considered a highly successful venture.

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[1] Paul R. Mort, "Studies in Educational Innovation from the Institute of Administrative Research: An Overview," in Matthew B. Miles, ed., Innovation in Education (New York: Teachers College, Columbia University, 1964), pp. 317-328. Mort writes: "Between insight into a need...and the introduction of a new way of meeting the need...there is typically a lapse of a half-century. Another half-century is required for the diffusion of the adaptation. During that half-century of diffusion, the practice is not recognized until it has appeared in 3% of the systems of the country. By that time, fifteen years of diffusion have elapsed. Thereafter, there is a rapid twenty years of diffusion, and then a long period of slow diffusion through the last small percentage of school systems." (p. 318)

[2] This is inference derived from the Katz et al. synthesis of research on innovativeness. (Elihu Katz, Martin L. Levin, and Herbert Hamilton, "Traditions of Research on the Diffusion of Innovation," American Sociological Review 28 (April), pp. 237-252.) Mort's studies, noted above, makes this same point quite explicitly. The wealth of a school or school district was one of the best predictors of early adoption of the innovations that Mort and his associates studies.

This point is illustrated by the following list of major findings from the Fall 1971 in-school survey:

- Within two months of its appearance, TEC was being used by 23% of the elementary schools in the United States.[3]
- TEC was being used in 45%, or nearly half of the schools that were equipped to receive it.
- In large cities, TEC was being used by 70% of all schools that were equipped to receive it.
- Approximately two million pupils were viewing TEC at school. This figure includes one out of every four second and third graders in large cities.
- TEC penetrated every major region and type of community (by size and socioeconomic status of residents) with rates above 13%.
- In general, however, TEC had greatest penetration in urbanized and low SES areas, in the North Atlantic and West-Southwest regions, and among pupils who have had greater than average difficulties with reading.

This was the good news. There was also some bad news. Many school systems were not well informed about TEC, did not have the technical capabilities to use TEC, or considered the series undesirable. The discussion of the Fall 1971 school questionnaire begins by taking up these barriers to adoption. Deficiencies in the technical capabilities of schools are found to be not only the greatest barrier to utilization of TEC but also a pervasive limitation affecting nearly half of the elementary schools in the nation.

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[3] By "elementary schools" we mean all schools containing grades 2,3, or 4. Definitions of the other terms in this summary are provided in the next section of this report.

3.0 THE FALL SCHOOL SURVEY

The Fall 1971 survey was designed to identify the in-school viewing audience shortly after TEC was first aired, during the 2nd to 6th week of the series. We did not expect that more than 3-5% of either schools or pupils would be tuned in at this early date. Despite this rather pessimistic prediction, it was deemed important to get a fairly accurate estimate of the kind of audience that TEC could command when it was still an experiment that had just appeared on the marketplace of educational resources. The objective was to acquire base-line estimates of utilization nationwide, in different regions of the United States, in areas of differing social status composition, and in areas of varying urbanization. All of these estimates were to be reported by grade level.

3.1 The Survey Design

The findings reported here are based on a stratified sample survey. All public and private schools in the United States which contain pupils in grade two, three or four constitute the population to which inferences can be made. In selecting the sample, the population was stratified by region (four categories), size of community (four categories), socioeconomic status of community (two categories), and size of school (ten categories). Population estimates based on all surveyed public and private schools are reported for the nation as a whole and for each of the four regional categories. Population estimates based on public schools only are reported for each of the six community categories.

Definitions of the regional and community stratification categories may be summarized as follows:

REGION

North Atlantic: The twelve states north and east of Maryland, Washington, D.C., and Pennsylvania, inclusive of these three.

Southeast: The ten states east of the Mississippi River and south of the Ohio and Potomac, plus Louisiana and Arkansas.

West-Southwest: Texas, Oklahoma, Colorado, Wyoming, Montana, and west, including Alaska and Hawaii.

Great Lakes-Plains: The remaining states fanning westward from Ohio to North Dakota and Kansas.

SIZE OF COMMUNITY

Large City: Counties containing a city of at least 180,000 residents in 1970. Nearly all schools in these areas will fall within the "large city" or within its immediate urbanized fringes. Examples of cities that are just large enough to fall in this category include Grand Rapids, Syracuse, Mobile, and St. Petersburg.

Medium City: Counties in the suburban metropolitan ring surrounding "Large City" counties. This ring is identified as a Standard Metropolitan Statistical Area (SMSA) in the U.S. Bureau of the Census reports.

Small City: All other counties containing a central city of 25,000 or more residents in 1970, as well as suburban (SMSA) counties not included in the previous category.

Other: Generally, counties containing no city larger than 24,999 residents in 1970, except suburban counties in SMSA's. This category basically refers to rural or un-urbanized areas.

SOCIO-ECONOMIC STATUS OF COMMUNITY

Low: Those counties having the largest proportion of individuals whose annual income is less than $3,000, the total population of these counties to be about 25 percent of the total population of the Region by Size of Community stratum. In approximate terms, this means those counties where the poorest one-quarter of the population in each region lives.

High: All other counties.

During the first week of November 1971 questionnaires were mailed to the principal in approximately 2300 sampled schools, 36 percent of whom had replied after one mailed follow-up. During the first week of December a 25 percent random sample of nonresponding principals were interviewed by telephone. In computing population estimates the two types of response were treated separately. Considerable confidence can be placed in the United States' estimates available from this survey, for a comparison of enrollment figures computed from this survey with estimates available from the October 1971 Current Population Survey of the U.S. Bureau of the Census revealed differences, on the average, of only 1.1 percent.

However, it should be noted that we report only "point estimates." To capture well the uncertainty associated with each point estimate would require computation of "interval estimates," which were not requested for this report. Unfortunately, even if interval estimates were available, the probability that a particular interval would contain the "true" population value would always be less than unity. Thus, even if this probability were set as high as .95, one interval estimate out of 20 would be expected not to contain the "true" value. This is one limitation of a sample survey, as opposed to a complete census, which readers should keep constantly in mind when evaluating the reported results.

There is another limitation of this sample survey, deriving from the use of principals as informants on what is happening in thier schools. We have no assurance that principals will always know what their teachers and other staff are using as instructional material.

Ideally, one would want to survey a sample of all teachers or staff in American schools, but we unfortunately lacked both the listings from which such a sample could be drawn and the large financial investment which would be needed to construct such a listing. On the other hand, we can expect that nearly all principals would either have the requested information readily available or would consult with someone who had the information. If some principals provided us with erroneous or biased information, we cannot be sure whether this would "inflate" or "deflate" our estimates. Caution must therefore be exercised to interpret the findings as estimates based on reports by school principals.

This brief introduction to the survey design will facilitate interpretation of the findings. For a more complete discussion of the sampling procedures the reader may wish to study Appendix D of this report. Also appended to the report is a copy of the questionnaire that was mailed to principals in November 1971 (Appendix A) as well as the set of basic tables on which the following discussion is based (Appendix B).

3.2 Overcoming Barriers to Adoption of TEC

Before any new educational technique is implemented by a school, the innovation must overcome three major "feasibility" hurdles. School staff need to be informed about the availability and utility of the innovation, they must have access to resources that give them the technical capability to implement a new approach, and they have to be convinced that the innovation is a desirable adjunct to their educational program or at least is worth an experiment. This section discusses these three hurdles and the extent to which TEC overcame them or was blocked by them.

3.2.1 Informing the Schools

CTW undertook several promotional efforts to make sure that school staff were well informed about the existence, objectives, format and content of TEC. Among these efforts were a PBS TV special for teachers that was aired shortly after Labor Day 1971. Commercial network TV also carried announcements, a "special," talk show discussions, and other news about TEC during prime time on and about October 18th, one week before the first broadcast of TEC. Paperback manuals on TEC were mailed to every elementary school librarian for distribution to 2nd, 3rd, and 4th grade teachers and to principals. A newsletter describing the series was mailed to schools. Finally, there were a spate of newspaper and magazine articles discussing the series. Our first estimate of the impact of these informational channels comes from the principals who responded to the Fall school questionnaire.

We asked the principals to tell us whether they had heard of TEC prior to receipt of the questionnaire. Fully two-thirds answered "Yes" (Table 1, column 5Y).[4] Although we have no standard against which to compare this level of informational saturation, it seems quite high, particularly for a new instructional program. We consider it unlikely that two-thirds of the nation's principals can recall any information about most of the specific educational materials that are available. Despite this positive note, CTW may be most interested in knowing where it failed to reach principals with news about TEC and why.

[4] These parenthetical notes refer to tables in Appendix B and to specific columns in those tables.

A regional breakdown shows that principals in the Southeast were by far the least informed, for only half of these principals reported previous knowledge about TEC. At the other extreme was the North Atlantic region where over three-quarters of the principals reported previous knowledge. Evidently the Southeast is still somewhat more isolated from major forms of media than are other regions of the nation.

Patterns of relative isolation from informational media are particularly pronounced by size of community. As the level of urbanization increases, so does the proportion of informed principals. Only 60 percent of the principals in rural areas had caught wind of TEC before our questionnaire arrived, whereas 81 percent of those in large city areas were so informed. This too should come as no surprise. The urban areas of the nation are normally saturated with more types and sources of information, and provide greater opportunity for contact between those who know and those who don't.

Some forms of media or information sources are more effective in reaching certain audiences than are others. We asked principals to tell us where they had heard about TEC. The most widely acknowledged individual sources of information were TV announcements, the direct mailing by CTW, and a mailed booklet called The Electric Company, each of which found its way to one-third of the principals who were in any way informed (columns 6D, G, and K). For scope of market penetration these advanced media systems were several times more efficient than were such oral-traditional sources as children, friends, or the radio (columns 6I, F, and C). In the middle range, reaching 20-30 percent of the informed principals, were newspapers, magazine articles and professional colleagues (columns 6E, F, and H).

The information richness of urban and northern United States is again apparent in the item-by-item analysis in Table 1 (see Appendix B). Magazine articles are the only information source that is generally more informative in less urbanized areas than elsewhere. All other media are more likely to reach urban American than the hinterlands. The fact that magazines are an exception to this rule may prove to be useful to CTW. Any effort to raise the level of information saturation should probably include a special effort to place articles in magazines. Unfortunately, the present data do not permit us to determine which kinds of magazines have had and might continue to have a differential impact favoring less urbanized areas. (The teacher questionnaire, as reported in Section 4.0, allows us to explore this issue further.)

No single source of information can hope to reach all members of a potential audience. Promoters therefore use a number of media with the hope that some will reach target and will reinforce each other. One need not explain to CTW the significance of this reinforcement for learning. But it is worth noting that more reinforcement was going on in urban and northern America than elsewhere. Informed principals in large city areas reported an average of 3.1 different information sources, compared to only 2.1 withint rural areas. In the Southeast this average dipped to 1.5 information sources per principal, while in the North Atlantic the average was 2.6 and in the Great Lakes-Plains it was 2.9.

Did these differences in informational penetration have a significant differential impact on utilization levels in various areas of the United States? Table 2 (see Appendix B) suggests that this may have been true. The table presents findings from a question asked

of those principals who said that no pupils were viewing TEC in their schools. We asked them to tell us why they weren't using the series. Approximately one-quarter of all principals, or nearly one-third of the "non-users" said that one of the reasons for not using TEC was because they had little or no information about the series (Table 2, columns 13J and K). These reasons for non-use were most prevalent in the least urbanized areas. Lack of information also seems to be a serious problem in the Great Lakes-Plains area and in the Southeast. If one looks down column 7N in Table 2, it becomes clear that these relatively uninformed areas also had the highest rates of non-viewing.

3.2.2 Equipping the Schools

Unfortunately, lack of information was not the major reason for non-use of TEC in schools. If it were the major reason, CTW could assure itself of a far larger audience simply by getting out more information. Promotion alone would, however, probably have little effect. More important is the need to awaken schools, governments, and interested persons to the technical deficiencies which many schools experience.

On the average, schools seem to have greater technical capability than they are currently utilizing. Table 5 shows that the average number of TV channels (both commercial and educational) that could be received in the viewing area of schools was 4.6. In no region, size of community, or SES of community stratum did this average fall much below 4.0. Although we didn't ask whether any of these were educational channels, it seems fair to assume that wherever there are at least four

channels one is likely to be educational. This supports the rather casual impression that the nation is fairly well covered by the TV medium and even by PBS broadcasters.

Another average also seems to indicate broad capability of schools to use TV. Table 6 presents the average number of TV sets per elementary school classroom. We find that TVs were available for one of every four classrooms nationwide, and for not less than one out of every six classrooms in each of the various strata or areas of the nation. These figures suggest that if TV sets are shared by several classrooms, most will have direct access to a set. Unfortunately, Table 7 and 8 raise questions about these generalizations. Among schools using TEC (Table 7), the ratio of TV sets to classrooms approaches one set for every two classrooms. But among schools not using TEC (Table 8), the ratio is one-to-five nationwide and as low as one-to-seven in some regions. Clearly, many schools -- particularly non-users of TEC -- lack sufficient hardware to make extensive use of instructional television as a part of the regular classroom program.

To estimate the extent of deficient hardware and related resources, we collected information on three types of technical capabilities. We asked principals whether they were in areas where TEC was being broadcast (Question 13A), whether they had any television sets available for instructional use (Question 2), and whether their sets were of sufficient quantity and quality to make instructional viewing feasible. This last item comprises three of the reasons for not using TEC; (1) that the receivers in a school were capable of receiving only VHF channels whereas TEC is broadcast on a UHF channel (Question 13B), (2) that the

school did not have a sufficient number of receivers to permit viewing of TEC (Question 13C), and (3) that the receivers in a school were not of sufficient quality to permit viewing (Question 13D). Each of these technical considerations imposes a severe constraint on the school's ability to employ TV for instructional purposes. In the long run, most can be overcome through investment in more and better equipment, but until that is done these factors remain stern barriers to TEC's fullest diffusion and utilization.[5]

We calculated the cumulative effect of these technological deficiencies. We wanted to know how many schools could not be expected to adopt TEC simply because they lacked one or more of the essential technical capabilities. We knew, for example, that approximately 13 percent of all principals or 18 percent of the non-users claimed that their schools were in areas where TEC was not being broadcast (Table 2, column 13A). But what additional proportion of schools had no TV sets, or had them in insufficient quantity and quality? The answer is presented in Table A below.

[5] A few schools borrowed or purchased television receivers so that they could use TEC. We will discuss these schools in Section 3.3 below.

TABLE A

PERCENTAGE OF SCHOOLS HAVING ONE OR MORE TECHNICAL DEFICIENCIES BY DEGREE OF DEFICIENCY, FOR THE UNITED STATES

DEGREE OF DEFICIENCY	PERCENT OF SCHOOLS*
COULD NOT RECEIVE BROADCAST	12.6%
COULD NOT RECEIVE, OR HAD NO TV SETS	38.5%
COULD NOT RECEIVE, HAD NO TV SETS, OR HAD INSUFFICIENT QUALITY OR QUANTITY OF TV SETS	48.7%

*Computed from Tables 9-13, Appendix B.

The cumulative effect of technical deficiencies is overwhelming. An estimated 48.7% of the schools in the United States were unable to adopt TEC because of these factors. This essentially divides the nation's schools in half; however, there is no typical or average school when it comes to the capacity to use TV for instructional purposes. If these deficiencies remain, TEC will not be able to reach more than 51.3% of the schools in the nation. This prospect is particularly regrettable because the deficiencies are unequally distributed, striking hardest in the Southeast and in the least urbanized areas (Table 2). Even many large cities, including those within the North Atlantic region, had many schools that were deficient.

It is important to note that the estimates of technical deficiencies or capabilities were not designed simply to tell us how much TV hardware schools own. Capability involves more than a closet full of TV sets. Some schools probably contain receivers that were never intended for instructional use (e.g., they are located in staff lounges). Many schools evidently have TV sets that do not receive PBS channels, do not receive UHF channels, or in some other way perform inadequately. Finally, the principals of some schools may not consider their receivers adequate for certain programs even if the sets work properly, on the grounds that there are not enough receivers for simultaneous use within all relevant classes or by all interested teachers. We therefore tried to devise questions that would in general tell us whether schools had hardware that were considered operational for instructional purposes. Because we were specifically concerned with TEC, two of these questions (13A and B) were phrased in terms of access to broadcasts of TEC. Considering that TEC was carried by over 200 television stations, access to any other program is not likely to be greater on the average than was access to TEC.

Within this framework, we have no reason to believe that the estimates of technical deficiencies are biased toward the high side. If anything, they may be a little low. Some 31 percent of the principals told us that they had "other" or unclassifiable reasons for not using TEC (Table 2, column 13L). Inspection of these comments revealed that many of them contained references to "broken TV sets," "weak reception," "the program is not broadcast during school hours" and the like. A

thorough editing and recording of these comments could easily raise the proportion of technically deficient schools above 50 percent of the total.

Our findings on technical capabilities regarding instructional television must be distinguished from some recent reports indicating wide availability of new technologies in schools. The most pertinent report of this nature was prepared last year by the U.S. Office of Education on the basis of a Spring 1970 survey conducted by the National Center for Educational Statistics.[6] This USOE survey found that fully 77 percent of public elementary schools had TV sets "available to any of the staff for classroom use." However, this finding should not be mistaken for an estimate of the proportion of schools having operational capabilities for actually using instructional television.

Significantly, the USOE survey also found that approximately 57 percent of public elementary schools were using TV in the classroom to help students learn. This percentage is just a few points higher than our estimate of the level of technical capabilities to view TEC in classrooms, which the Fall 1971 TEC survey findings set at about 51 percent (Table A). Although these two surveys are sufficiently different in design and content to make comparison difficult, they do suggest two interesting observations.[7] They suggest that if a school

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[6]National Center for Educational Statistics, "Basic Statistics on Instructional Television and Other Technologies," Bulletin, 7 (U.S. Office of Education, February 9, 1971).

[7]Besides differences in how questions were phrased, the USOE survey took place in Spring 1970 using a population of all public elementary schools, whereas the TEC survey took place in Fall 1971 using a population of all public and private schools containing grades 2, 3, or 4.

had operational TV sets, it was also making some instructional use of them. They also suggest that TEC's immediate potential audience of technically capable schools was limited to schools that were already using ITV.

If ITV and TEC are to become much more widely used by schools, a substantial effort needs to be made to increase the number of schools having technical access to the medium. School TV sets will have to be purchased, updated, repaired, or converted to a frequency that is compatible with educational telecasts. Broadcasters will need to be persuaded to air programs such as TEC during school hours. Without efforts to overcome these deficiencies, half of the elementary schools in America will remain out of step with the pace of instructional innovation and out of reach of opportunities available to the other half.

3.2.3 Pedagogical Considerations

Technical capabilities are of such great importance in shaping the immediate potential audience of TEC that we should often "control for" the presence or absence of these capabilities in analysing school utilization. For example, to understand the impact of non-technical reasons for not using TEC, we should consider the views of only those principals of schools that had the capability to adopt but still did not do so. Analysis of this issue is presented in Table 4.

Unexpectedly, we found that among non-using but technically capable schools there were relatively few pedagogical reasons for non-use of TEC. Of the principals in these schools, fewer than five percent gave any one of the following reasons for non-use: (1) that the medium

of TV is not "useful" for "instruction in reading," (2) that TEC is "inappropriate for our instructional purposes," or (3) that TEC is undesirable because it was not of local origin (columns 13E, F, and G).

Among these three responses, only the second presents a notable pattern by region or by type of community. Nearly all of those who objected to the content of TEC as inappropriate to their purposes were located in middle America's Great Lakes-Plains region or in low SES communities. We can only speculate as to why some principals in these areas found TEC's content incompatible. Their objection may in part reflect a resistance to the TV medium in general, and to its promise of painless or satisfying learning. Whether their objection also reflects deeper pedagogical or cultural values cannot be ascertained. It is worth noting, however, that their objection is not likely to be rooted in a distaste for biracial material. If the attitudes of Southeastern school principals can be taken as a barometer of racial concerns we find in that region virtually no objection among principals at technically capable schools to TEC on pedagogical grounds.

One further objection to TEC that has pedagogical overtones is that teachers are not deemed sufficiently experienced in the use of a television approach to utilize it in the teaching of reading. Experience at all ages is often gained only through experimentation. To object to TEC on these grounds is essentially to object to teacher experimentation and to affirm tradition as the most reliable procedure. We found, with some surprise, that very few principals gave this as a reason for non-use of TEC. The lack of teacher experience with TV was

cited by only 3 percent of the technically capable non-users, and by only 11 percent of all non-users (column 13H).

While all of this suggests that pedagogical reasons do not play a major role in the non-use of TEC, we must be cautious about how this finding is interpreted. We do not know whether user schools were positively enthusiastic about TEC on pedagogical grounds. We did not ask user principals why their schools were using TEC. We do have some information on this from teachers, which will be reported in Section 4.0, but it is not exactly comparable. All that we can say with assurance here is that principals of non-using but technically capable schools rarely gave pedagogical considerations as a reason for non-use.

A second qualification is in order. Many principals who had pedagogical objections may not have stated them. Principals inevitably learn some diplomacy if they are to survive. It may be more diplomatic to attribute non-use to any valid impediment other than pedagogical beliefs and let it go at that. This would not inflate other reasons for non-use so much as deflate pedagogical ones. It is interesting in this regard to note that half of the principals in capable but non-using schools wrote in a special reason, and that many of these reasons turned out to be elaborations of what we call technical deficiencies (column 13L). In short, it is possible that a sizeable minority of principals objected to TEC or ITV but took comfort in the fact that they could not use the series even if they wanted to.

Among the non-using capable schools the only classifiable reasons for not using the series that stand out are those referring to lack of information (columns 13J and K). Again, the principals involved here

may have had other unstated reasons. Some may even have had unusually high standards regarding how much information is necessary before they are convinced of the value of TEC. For whatever underlying reason, nearly a quarter of these principals considered lack of information a valid explanation for non-use. This explanation is once again particularly prominent within less urbanized areas.

To summarize, we find little evidence that school principals were unwilling to experiment with new instructional techniques such as TEC. The series encountered little resistance on purely pedagogical or ideological grounds. Many principals thought that they simply lacked enough information on which to base a decision to adopt. Many more told us that their schools did not have the technical capabilities to use TEC. The major reported barriers to utilization were not willingness but access. With this in mind, we turn to an analysis of the extent of utilization.

3.3 Utilization Levels: Adoption by Schools

Utilization levels were determined for two types of "users:" 1) schools that adopted TEC, and 2) pupils who viewed TEC. These two user categories were in turn subdivided to permit measures of utilization within each grade level and by target pupils having difficulty with reading. Finally, for each of these measures we report both unadjusted utilization levels based on all schools regardless of their technical capabilities, and adjusted utilization levels based only on schools having technical capabilities. The findings for all of these measures appear in Tables 9 through 34. Our brief commentary is a guide to highlights from these findings.

3.3.1 General School Adoption Levels

The significance of school adoption goes beyond the prime objective of giving pupils in-school exposure to TEC. Adoption in the Fall of 1971 also experimentally exposed school staff to TEC. This school exposure made possible a test of TEC's compatibility with the school program, an assessment of TEC by teachers who were using it as well as by their colleagues, and an informed basis for deciding how the school could best use the series in the future. In this sense any adoption was a schoolwide experiment. A simple measure of TEC's acceptance as an experiment is, then, the number and percent of schools where some pupils were viewing TEC -- regardless of the number of pupils, teachers, or grade levels that were directly involved. We begin with some general estimates of these general adoption levels (see Table 9 and 10, Appendix B):

- During the Fall of 1971, there were an estimated 18,811 schools in which some pupils in grades 1 through 6 were viewing TEC. This comprised approximately 23 percent of the nation's public and private schools containing grades 2, 3, or 4.

- In each of two regions, the North Atlantic and the West-Southwest, 28 percent of the schools were using TEC. The Great Lakes-Plains region was slightly lower at 21 percent, and the Southeast had the lowest proportion at about 14 percent.

- Nearly half of the large-city schools were using TEC, compared with about 29 percent of the medium-sized-city schools, 20 percent of the small-city schools, and 14 percent of the rural and non-urban area schools.

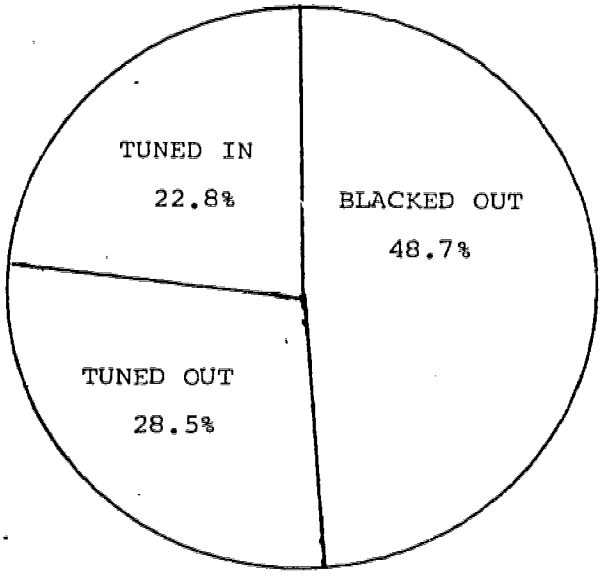
- In the poorer or low SES communities, about 26 percent of the schools were using TEC. This was slightly higher than in high SES communities, where about 24 percent of the schools adopted TEC.

These basic findings indicate that TEC met with substantial nationwide acceptance, especially in urban centers, in the East and in the West, and in poor communities. Extensive experimentation with TEC was concentrated in urban industrial areas where educational problems have become most salient. Somewhat less involved were areas that we might call "middle America," the midwest and middle sized suburban communities. The lowest adoption occurred in rural America, the Southeast and small town communities, where schools have educational problems of a more traditional nature due to their relatively great distance from urban-centered trends in cultural modernization.

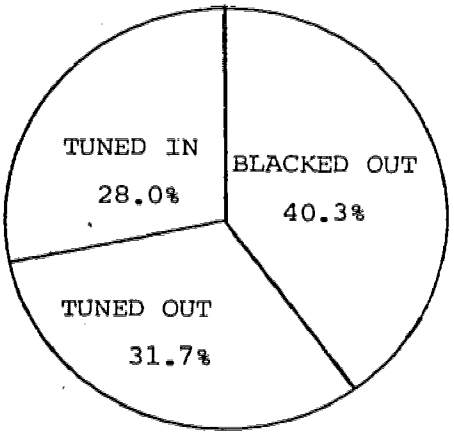
These unadjusted estimates do not, however, give a complete picture of TEC acceptance by potential users. One group of schools tuned in to the series, while another group of schools tuned out. But a third group of schools could do neither; they were "blacked out." As reported in Section 2.0, technical deficiencies were so great as to make viewing of TEC either impossible or infeasible in nearly 50 percent of the schools. These were the blacked out schools. Their inability to use TEC should be distinguished from the non-use of the capable but tuned out schools.

The illustrations on the following two pages depict the relative share of tuned in, tuned out, and blacked out schools in each regional and community stratum. These illustrations also reveal the extent to which black out levels limited potential and actual utilization levels. For example, in the Southeast where a troublesomely low 14 percent of the schools were tuned in, fully 64 percent of all schools were blacked

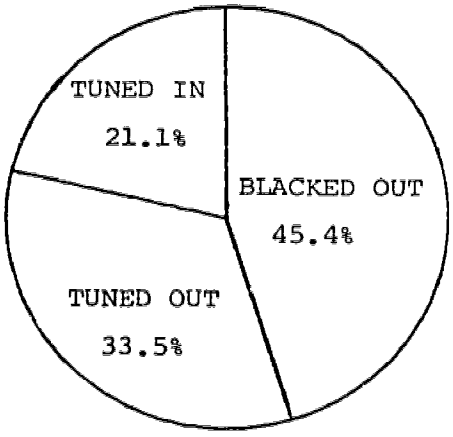
FIGURE A. Percent of Schools Tuned In, Tuned Out and Blacked Out, for the United States and by Sampling Stratum



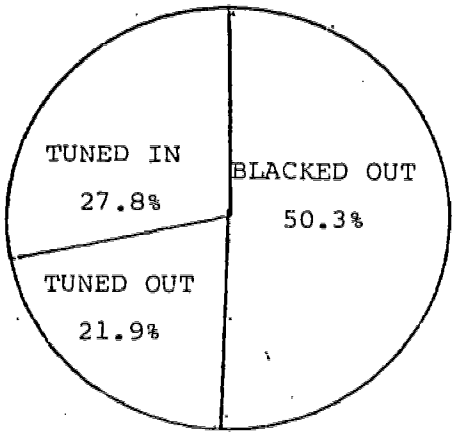
UNITED STATES



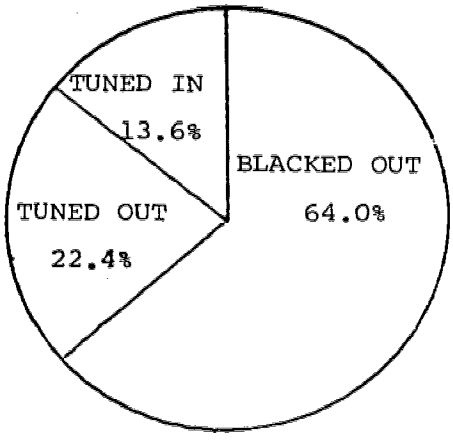
NORTH ATLANTIC



GREAT LAKES-PLAINS



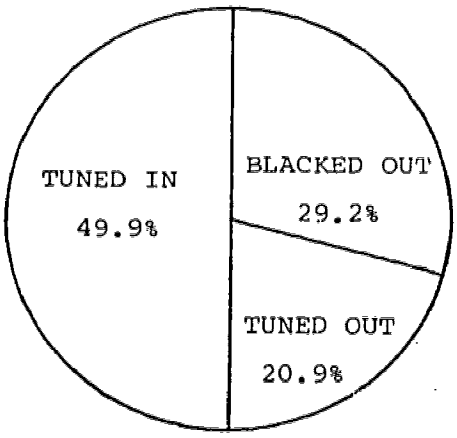
WEST-SOUTHWEST



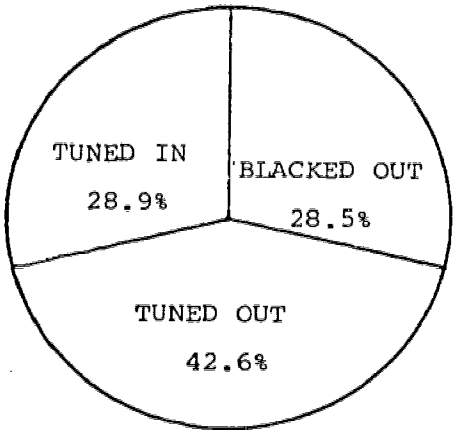
SOUTHEAST

DRAFT

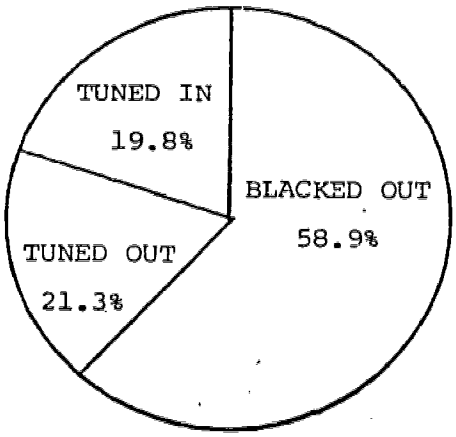
FIGURE A. (continued)



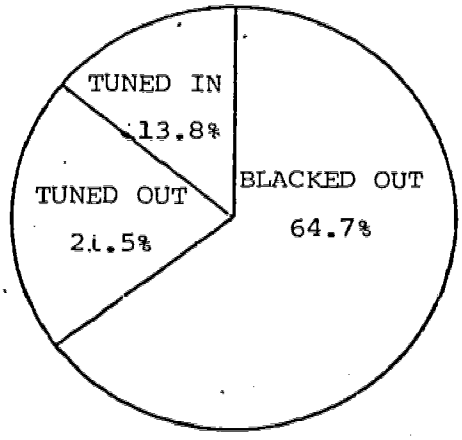
LARGE CITY



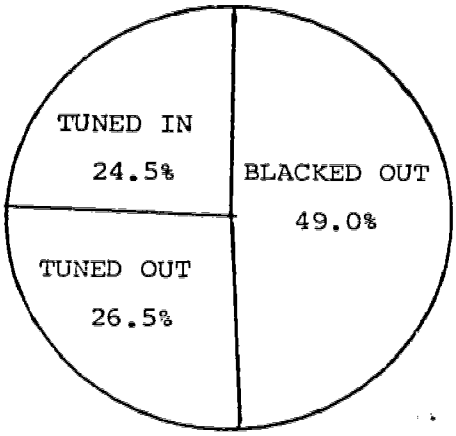
MEDIUM CITY



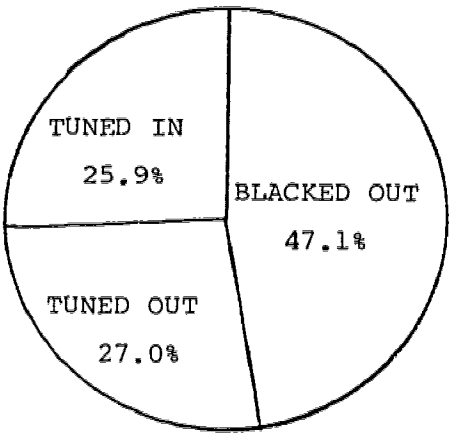
SMALL CITY



OTHER



HIGH SES



LOW SES

out because of various technical deficiencies, leaving only 22 percent that were tuned out. In large city schools where adoption was highest, 50 percent were tuned in, only 29 percent were blacked out, and 21 percent were tuned out.

In general, areas where adoption was highest were also areas where technical deficiencies were lowest, and conversely areas where adoption was lowest tended to be areas where the greatest percent of schools were blacked out. A major exception to this pattern occurred in medium city schools. In this instance, adoption was slightly above average at 29 percent of the schools even though the black out level, also at 29 percent, was exceptionally low. It should be noted that medium city schools were mostly if not exclusively located within suburban areas surrounding large cities. This locational advantage may account for their relatively high technical capabilities, as well as for their modest adoption levels given these capabilities. Perhaps their pupils were already programmed into many of the newer educational technologies and time could not readily be found for more.

In light of the limitations imposed by the reported black out levels, what were the patterns of adoption among capable schools only? The "adjusted" estimates which answer this question are reported in Tables 11 through 13 (Appendix B). Table 11 includes only the schools that were in areas where TEC was being broadcast. Table 12 considers only the schools having the additional capability of at least one available TV set. And lastly Table 13 is based only on the schools

having full capability, including access to broadcasts and workable TV sets in sufficient quantity and quality to permit viewing of TEC in classrooms.

The obvious effect of narrowing the definition of "potential users" is to successively increase the estimates of utilization levels. For example, whereas 23 percent of all elementary schools in the United States were tuned in, this estimate increased to 26 percent of schools in areas where TEC was being broadcast, to 37 percent of schools that also had at least one TV set, and to approximately 45 percent of schools having full technical capabilities. This is evidence of remarkable acceptance wherever adoption was technologically feasible.

Adjustments for the three types of technical deficiencies produced similar increments in utilization estimates for all regional and community strata. The overall impact of these increments may be summarized by focusing on adoption among fully capable schools (Table 13). Attention is drawn to three findings:

- TEC's wide acceptance within large cities becomes even more distinctive when we consider only capable schools. Approximately 70 percent of the big city schools having full capabilities were using TEC. If we admit that there will always be some capable non-users, then the scale of this first-season experimental adoption within large cities probably came close to the saturation point.

- The previously noted adoption levels in rural and small town America seemed to be markedly low compared with other areas. It is now clear that this distinction was in large part due to technical deficiencies. Among schools having full capabilities, adoption within less urbanized communities was about as extensive as it was for the United States as a whole. In fact, a greater share of capable small city schools were using TEC (48 percent) than was true among capable schools in medium or suburban cities (40 percent). Even in the Southeast, the adoption level moves up fairly close to the national average when we consider only capable schools.

- Finally, it may be gratifying to note that schools in low SES communities had slightly higher adoption levels (49 percent) than schools in high SES communities (48 percent), even after controlling for technical deficiencies. More meaningful than this slight difference is the fact that schools in low SES areas were definitely not left out of the TEC picture.

To summarize, there was wide variability between regions and community strata in terms of unadjusted adoption levels. However, some of this variability was due to differences in technical capabilities. When we considered only the fully capable schools, most areas of the nation had fairly similar adoption levels (in the 38-49 percent range). When they possessed the ability to use the series, nearly half of the schools in both rural and middle America adopted it. Yet, once again higher adoption levels occurred in urban industrial America. In the West-Southwest, for example, a little over half of the capable schools were adopters. More notable were large city schools, where a truely outstanding appeal was strongly evident.

3.3.2 School Adoption by Grade Levels

Although TEC was designed with the second grader in mind, schools could and did adopt the series for use in grades one through six. TEC may even have been used in higher grade levels an in kindergarten, but we did not ask about those grades. Nor did our sample design permit us to measure the full utilization in grades 1, 5, and 6, for our sample represented only schools containing grades 2, 3, or 4. Many "middle schools" containing grades 5 or 6 were not included, and there were probably some special K-1 schools that were also not included in our

sample design. Hence, the reader should keep in mind that all estimates for grades 1, 5, and 6 apply only to such grades in schools containing grades 2, 3, or 4.

Basic estimates of the extensiveness of school adoption by grade levels appear in Tables 14 through 18 (Appendix B). These tables show the number and percent of schools having a particular grade level in which some pupils at that grade level were viewing TEC. The construction of these tables parallels the previous series (Tables 9-13). That is, after presenting unadjusted estimates based on all schools, some adjusted estimates based only on capable schools are presented. Proper interpretation of the grade level estimates may be facilitated by some preliminary observations on the distribution of adoptions throughout grades one to six.

It may be recalled that approximately 23 percent of all surveyed schools had adopted TEC for viewing by some pupils at some grade level. Table 15 shows that 18 percent of the schools had adopted TEC for viewing at the second grade level. Unless this latter finding is put in proper perspective, it may seem remarkably low. Indeed, all grade level estimates are lower than the earlier general school estimates. This is because schools distributed their experimental adoptions among various grade levels, and in no instance did all adopter schools use TEC for the same grade level.

A clearer description of this situation is presented in Table 14. An estimated 13,112 schools containing grade two were using TEC in that grade. This is approximately 70 percent of the estimated 18,811 adopter

schools in the United States as reported in Table 9. Viewed from this perspective, adoption for second grade viewing is rather high. Over two-thirds of the adopters took CTW's implicit grade level audience on faith. The other adopters evidently took faith in TEC's promise to be instructive at other elementary grade levels as well.

For grades above and below grade two, adoption levels slacken off. This is what we should expect, given the objectives of TEC. Again, however, the obverse point merits emphasis. In November 1971 a surprisingly large number of schools were using TEC at grades other than two. An estimated 11,813 schools, or 63 percent of all surveyed adopters, were using TEC in third grade. Moreover, approximately 39 percent were using it in fourth grade, 23 percent in fifth grade, 11 percent in sixth grade, and even 33 percent in first grade.[8] This suggests two things. Teachers were liberally experimenting with TEC according to their own purposes at all school grades, with a special preference for grades two and three. And most schools evidently adopted the series for viewing within two, three, and even four or five different school grades.

The average number of tuned in grade levels per adopter school was 2.4 nationwide (computed from Table 14). This suggests that in the "average" user school, some pupils in at least two grade levels were viewing TEC simultaneously. It also suggests that experimental adoption

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[8] These percentages were computed from Table 14 using the total 18,811 adopter schools as the denominator. As they are stated here, these percentages are fairly accurate estimates. (If we possessed the relevant data they could have been stated as percentages of adopter schools having the grade level in question. This approach would have raised each percentage by several points.)

of TEC was far more intensive, by a factor of 2.4, than if each school had used the series for only a single grade. Within most community or regional strata, the intensiveness of adoption was at or slightly below the nationwide average of 2.4 tuned in grade levels per adopter school. However, four strata were somewhat higher than average. These were the Southeast (3.1 grade levels), the least urbanized communities (2.9), low SES communities (2.6), and the West-Southwest (2.6). These areas include many schools having a locational or status disadvantage with respect to access to newer instructional resources. Yet when schools in these areas did have access to TEC and did adopt it, they tended to make an exceptional effort to intensively use the series for multi-grade viewing.

The extensiveness of adoption, as shown in Tables 15-18 (Appendix B), refers to the estimated percent of all schools (or of all capable schools) that were using TEC at each grade level. It was noted that these estimates will always seem low in comparison with general school adoption levels, even though they are on the average higher than if adoption had occured for only one grade level in each school. Moreover, the greater effort of the more intensive adopters will also have an effect on the estimates in Tables 15-18. Schools in those areas where multi-grade adoption was widespread will register some overall gains relative to schools in areas where adoption was less intensive.

These points may be affirmed by an inspection of either the unadjusted or the adjusted estimates in Tables 15-18. For the convenience of brevity, we comment on only the adjusted findings for fully capable schools (Table 18). Also for brevity's sake, we substitute the abbrevi-

ation "percent of capable schools" for the more accurate but cumbersome "percent of fully capable schools containing the grade level in question as well as grade 2, 3, or 4."

- Nationwide, an estimated 34 percent of the capable schools were using TEC in second grade. This drops to 30 percent in third grade before trailing off to roughly 20 percent in each of first and fourth grades, and to less than 10 percent in fifth or sixth grade.

- By region, capable schools in the West-Southwest recorded the highest adoption levels in all grades but the second. This was partially due to intensive multi-grade utilization in this region. For the same reason, Southeastern schools had relatively high adoption levels for all grades. In contrast, the Great Lakes-Plains region had the lowest levels of adoption for all six grades. This seemed to be the result of three factors: some pedagogical resistance in this region, modest general adoption levels, and a tendency to experiment with TEC in relatively few grades at a time.

- By size of community, the large city schools again had highest adoption levels, but the margin of difference is not as great by grade levels as it was for the general school adoption estimates. Intensive multi-grade adoption by schools in less urbanized areas substantially raised their grade level estimates relative to those of large city schools. As a result, the schools having the lowest adoption levels for all six grades were located in medium sized cities, the suburban areas.

- By SES of community, adoption levels were again highest in the low SES areas, but only for grades 1, 4, 5, and 6. High SES areas tended to concentrate their adoptions within grades 2 and 3.

These findings demonstrate a certain "compensating effect" by schools in areas where general adoption levels were low. Although relatively few schools adopted TEC in the Southeast and in the less urbanized areas, those that did adopt partially "compensated" for the others by adopting for many grade levels. Why this happened can only be guessed at this point. Perhaps it was because, as Table 18 indicates,

they had a particularly strong reason for using TEC at higher grade levels. Whatever the cause of this tendency, the consequence was to reduce many of the differences between strata in terms of adoption levels.

3.3.3 Target School Adoption

Target schools may be defined as those schools having more than the median percent of pupils who were behind grade level in reading skills. This identifies that half of the schools where reading problems were greatest. These are the schools where the promise of TEC was most relevant to the needs of pupils. If TEC was being used to meet these needs, we should expect target schools to have higher adoption rates than non-target schools.

This was in fact the case. Table 19 shows that approximately 25 percent of the target schools throughout the United States adopted TEC for viewing by some pupils at some grade level. This compares with a 23 percent adoption level for all schools, and with an approximate 20 percent level for non-target schools. A comparison of Table 19 with Table 10 reveals that in all four regions and in most of the six community strata some differences favoring target school adoption occur. Differentially high adoption by target schools was particularly strong in small city and low SES communities. Only in medium sized cities was adoption by target schools substantially less likely (18 percent) than was adoption by all schools (29 percent).

Table 20 shows target school adoption levels by school grade. In this case, a target school was defined as one having more than the

median percent of pupils behind grade level in reading skills for the school grade in question. We find that adoption was generally "on-target" in grades 2, 3, 4, and 6. In grades one and five there was a very slight tendency to favor non-target schools. (Note that these are unadjusted estimates; adjusted estimates were not computed in this instance.)

Overall, target schools were clearly favored for the series. These were some of the strongest findings supporting the proposition that TEC would be used most wherever its purposes were particularly relevant to pupil needs. This proposition will be explored further in the discussion of pupil viewing levels, where we can assess the extent to which target pupils were exposed to TEC.

3.3.4 A Note on Private School Adoption

The careful reader may have noticed that the utilization estimates for community strata tended to be slightly higher than the estimates for regional strata or for the United States as a whole. This was because the community strata estimates were based on public schools only, whereas the regional and United States estimates were based on public and private schools. The combined public/private estimates were reduced somewhat due to relatively low adoption levels by private schools. To illustrate, we take an example developed from the general school adoption estimates reported in Tables 10 and 11.

Nationwide, approximately 24.9 percent of the surveyed public schools adopted TEC. Among private schools, only about 13.6 percent adopted, or about half the rate of public schools. Combining these

two types of schools, most of which were public, produced the previously reported United States adoption level of 22.8 percent of all surveyed public and private schools. Moreover, the higher adoption levels within both low SES communities (25.9 percent) and high SES communities (24.4 percent) clearly results from the fact that these community estimates were based on public schools only. In general, the pattern of higher public school adoption persists throughout all measures of utilization. For this reason, some caution should be exercised in any comparison of community strata estimates with regional or United States estimates.

A more important implication of this finding cannot be fully explored here. Why did private schools have such relatively low adoption levels? Was it because they have some reluctance to use public media as an instructional resource? Or might it be due to the wide variability among private schools -- some are as distinctive for the richness of their curricula as others are distinctive for their commitment to traditional methods? Whatever the reason may have been, the current study was not designed to explore this issue. There simply were not enough private schools of each major type within the sample to permit reliable analysis and estimation.

3.4 Utilization Levels: Viewing by Pupils

Despite all evidence of extensive adoption of TEC, one might still wonder how many pupils were actually tuned in. Exposure could have been limited to relatively few students on the grounds that the series was new and experimental. More important is the issue of exposure among target pupils having the greatest difficulty with reading. Were they in the groups of pupils who were viewing TEC?

3.4.1 All Pupils

Overall, an estimated 2,108,000 pupils in grades one through six were viewing TEC in school as part of their regular Fall 1971 school program (Table 21). To put the size of this audience in perspective, consider that it represents an average of 112 student viewers in each of the estimated 18,811 adopter schools. In second grade alone, there were 682,000 estimated viewers, or an average of about 52 per school using TEC at this grade. Grades one and three had about 50 viewers per adopter school, and grades 4, 5, and 6 each had roughly 40. These findings indicate that the average user school was exposing the equivalent of just under two classes per grade level and three to four classes schoolwide. (Note again that these estimates are only for schools containing grades 2, 3, or 4.)

Another way to assess the size of the viewing audience is presented in Tables 22 through 25 (Appendix B). These tables show the percent of all pupils in each grade level who were viewing TEC in that grade, with estimates reported in both unadjusted and adjusted form. It is useful to compare the percent of pupils viewing within a grade with the percent of schools adopting for that grade.

For example, whereas 17.7 percent of schools having grade two adopted for that grade (Table 15), 16.3 percent of pupils in grade two were viewing TEC (Table 22). Similarly, 16.8 percent of schools having grade three adopted for that grade, and 14.4 percent of pupils in third grade were regular in-school viewers. In fact, most of the pupil viewing level estimates were just slightly below the corresponding school adoption level estimates. One implication of this comparison

is that wherever TEC was being used in a school grade, most of the pupils in that grade were viewing.[9]

Given these observations, it is not surprising that the patterns of pupil viewing by region and community type were very similar to the patterns of school adoption within school grades. Consider, for instance, the following conclusions drawn from the pupil viewing estimates in Tables 22 through 25:

- Pupils in large cities were most likely to be exposed to TEC, and pupils in medium, suburban cities were generally least likely.
- Compared with pupils in high SES communities, those in low SES areas had a very high probability of exposure in all grades but the third.
- High levels of adoption in the West-Southwest was reflected in high viewing levels in this region.
- Schools in the Southeast and in less urbanized areas generally had relatively low unadjusted viewing levels, although the adjusted estimates show that within schools having full capabilities viewing levels in rural America were generally among the highest reported anywhere.

These conclusions reinforce the earlier findings regarding the areas where TEC was most widely accepted. They also demonstrate anew the tendency of low-adoption and low-status areas to have adopter schools which make a special effort to expose great numbers of school grades and pupils to TEC.

3.4.2 Target Pupils: Slow Readers

For the purposes of this study, target pupils were defined as those who were behind grade level in reading skills. A standardized

[9]This inference assumes that adopter schools were not much larger in size than non-adopter schools. Actually, they probably were a little larger due to the high adoption levels in high density areas.

measure of reading skills was not feasible in our survey design, nor was one essential. We asked principals to indicate the proportion of their pupils who were "behind grade level" in reading skills. This gave us a relative measure based on the principals' estimates of the standards, pace, and relative success of the school program in each school. Pupils who were deemed "behind" relative to school standards would probably continue to fall even further behind and become marked with the stigma of failure unless they could somehow be brought back in pace. These pupils and their teachers could be helped if an effort were made to apply resources to their needs. TEC was such an effort.

The series was at least modestly successful in finding its way to target pupils. This was indicated, in the first instance, by the number and proportion of viewers who were "on-target" (Table 26). An estimated 518,000 in-school viewers, or 25 percent of all viewing pupils, were reported by their principals to be behind grade level in reading skills. The proportion of viewers who were on-target was highest in 4th, 5th, and 6th grades, where roughly 30 percent of all viewers were behind in reading skills. In 2nd and 3rd grades, about 25 percent of the viewers were on-target, and in first grade only about 17 percent were behind in reading. This pattern is in the expected direction if TEC were being used to help slow students catch up, for in the higher grades the need for help in reading becomes more obvious and crucial. Being behind in reading is likely to be a severe handicap for the fourth grader, an emerging burden for the second grader, but only a barely discernable problem for the first grader.

As a second measure of TEC's success in reaching slow readers, estimates were computed of the proportion of target pupils who were tuned in (Table 27). These target exposure estimates are most informative when compared with the extent of viewing among all pupils, target and non-target (Table 22). If the slower readers were favored as TEC viewers, their exposure levels should be higher than the corresponding levels of exposure among all pupils. An illustration of this comparison is presented in Table B below for the unadjusted United States estimates.

TABLE B

PERCENT OF ALL PUPILS AND OF TARGET PUPILS WHO VIEWED THE ELECTRIC COMPANY AT SCHOOL AS A PART OF THEIR REGULAR SCHOOL PROGRAM DURING THE FALL OF 1971, FOR THE UNITED STATES*

	SCHOOL GRADE					
	1ST	2ND	3RD	4TH	5TH	6TH
PERCENT OF ALL PUPILS	7.5	16.3	14.4	6.9	3.8	1.9
PERCENT OF TARGET PUPILS	7.1	19.2	16.8	11.0	4.5	2.8

*ESTIMATES WERE TAKEN FROM TABLES 22 AND 27, APPENDIX II.

In all grades but the first, slow readers were clearly favored as TEC viewers. Two factors account for this. First, it was noted earlier that adoption levels were generally higher in "target schools" than in schools having relatively few pupils who were behind in reading.

Secondly, those schools that did adopt permitted access to TEC by their slow readers, or at least did not selectively exclude them. The reverse of these observations applies to the first grade, where non-target schools and pupils were slightly favored. Perhaps this first grade reversal reflected a tendency, however slight, to use TEC as a form of enrichment for early starters doing well in reading.

This pattern favoring target viewing in grades other than first persisted throughout nearly all regional and community strata. If the reader compares Tables 22 and 27 in their entirety very few exceptions will be found. It is interesting to note that medium sized suburban cities were not an exception, despite the earlier finding that this was the only strata where non-target schools had significantly higher adoption levels than target schools. Suburban area schools that did adopt TEC were evidently selectively exposing their poor readers.

The general pattern of high target exposure may have been confounded by differences in the capabilities of schools to adopt TEC. It is possible that target pupils in some areas and non-target pupils in other areas had an advantage simply because they attended the best equipped schools. To control for this confounding factor, we turn to the adjusted estimates based only on schools that were sufficiently equipped to have a realistic choice of whether to adopt and who should view.

Surprisingly, the relatively low target viewing levels persist in the adjusted estimates for low SES communities. Consider the second grade, in which approximately 33 percent of all pupils in fully capable low SES area schools were TEC viewers (Table 25), but only about 22

percent of target second graders in such schools were tuned in (Table 30). Similar differences were found for all six grades in low SES communities, including the higher grades where the rationale for target viewing is strongest. Low SES area schools were evidently adopting TEC largely for viewing by non-target pupils.

The low SES stratum was not alone in this regard. By narrowing the focus to schools having the capabilities that permit choice, we found that schools in the Southeast and in small city communities also had viewing patterns favoring non-target pupils within all six grade levels. The least urbanized communities were marginal in this respect, favoring non-target pupils in grades one through three. The producers of TEC may take comfort that these were the only areas manifesting this tendency. All other regional and community strata followed the basic nationwide pattern of differentially high viewing levels for target pupils in most or all grades but first.

Why was in-school viewing in small town rural America and in low SES communities uniquely unfavorable to target pupils? One possible explanation can be eliminated. It was not because slower readers in these areas disproportionately attended school lacking access to TEC, for the issue emerges most distinctly when we consider only the most capable schools. This makes the question all the more intriguing. Unfortunately, the current survey provides no answers; we can only speculate.

Perhaps schools in these areas used TEC in the same way that a college-track program is used in many high schools, to facilitate opportunity and cultural enrichment among their more promising students.

This reasoning may be particularly attractive to school staff who have charge over predominantly disadvantaged or culturally isolated children, and who are faced with the task of getting some of them off and running. On the other hand, do suburban and high SES areas not need TEC to provide opportunity for their abler students, and therefore tend to use the series primarily to help those who are behind? These and other possible speculations deserve closer study in subsequent years if we are to understand how an experiment intended for one use seems to acquire a somewhat different use in certain areas.

3.4.3 Demographic Patterns of Utilization: A Summary

Certain patterns of utilization recurred throughout all of the measures of school adoption and pupil viewing levels. These patterns may be briefly summarized in terms of four major although overlapping demographic groupings.

- URBAN INDUSTRIAL AMERICA
  Schools in the most urbanized and industrial areas generally had high technical capabilities, very high adoption levels, and used TEC in relatively few grades per adopter school. They also had fairly high pupil viewing levels with an emphasis on exposure among slower readers. This pattern was characteristic of schools in large cities, the West-Southwest, and in the North Atlantic region.

- MIDDLE AMERICA
  Schools in the mid-continent and in middle class areas tended to have fairly high technical capabilities, low adoption levels, and used TEC in relatively few grades per adopter school. They had fairly low viewing levels, although the emphasis was on target pupil exposure. This pattern was characteristic of schools in medium sized suburban cities, in the Great Lakes-Plains region, and in the broad middle and upper strata that was termed "high SES communities."

- SMALL TOWN AND RURAL AMERICA
  Schools in this grouping tended to have low technical capabilities, low adoption levels, but used TEC in many grades

per adopter school. As a result of this multi-grade utilization, pupils viewing levels were moderate to high, although there was a tendency to provide greatest exposure among non-target or abler pupils. This pattern generally applied to schools in the Southeast and in small city and rural communities.

- DEPRESSED AREAS
  Low SES communities did not fit into any of the three previous groupings, partly because they include both depressed urban centers and poverty stricken rural areas. The mixing of these different types of low SES communities produced the following pattern: Average capabilities and adoption levels, intensive multi-grade utilization, high viewing levels, and exposure patterns that tended to favor the more promising students in these areas.

Overall, the utilization level findings indicate that TEC probably had unprecedented success as a first year experiment. Utilization was remarkably high, widespread, and generally on target. The urban industrial areas made the greatest use of TEC to meet the greatest need. Suburban and mid-American schools evidently saw less need for TEC, but responded with adoption patterns geared to such needs as did exist. Rural and depressed areas made fairly intensive use of TEC despite widespread technical deficiencies within their schools, and their tendency to favor exposure among abler students may merely reflect aspirations to help some of their children overcome conditions shared by most of them.

3.5 Activities Undertaken to Facilitate Viewing

Schools that used TEC often facilitated viewing by making some adjustments and adaptations in how they grouped students, arranged class schedules, prepared teachers, and equipped rooms with TV receivers. Principals were asked to provide some basic information about these

facilitative activities and the extent to which they undertook them. The principals' responses concern efforts of whole schools or of staff who were in some way undertaking activities known to the principal. Later, in discussing the teacher questionnaire, we consider the efforts of individual teachers who used TEC.

Equipping the classroom was an essential facilitating activity. Most adopter schools already had sufficient TV sets and related equipment to permit some viewing. Many non-adopter schools had inadequate equipment and could not easily make up their deficiencies. However, some schools were able and willing to invest in the purchase or rental of TV equipment. In order to facilitate the viewing of TEC, about 4 percent of all surveyed schools across the nation purchased TV equipment, and about one percent rented equipment (Table 35, columns 11B and A). The scale of this investment becomes much larger when taken as a percent of adopter schools, for among the adopters about 17 percent purchased and 4 percent rented TV equipment. Investment in the purchase of equipment was most widespread in the West-Southwest, large cities, rural communities, and low SES communities. In low SES areas alone, about one-third of the adopter schools purchased TV equipment.

These findings indicate unexpectedly strong commitment by many schools in depressed areas to draw from typically hard-pressed budgets in order to facilitate immediate viewing of TEC. However, some caution should be exercised in making this interpretation. We do not know how much capital was actually invested by the typical school, nor whether the equipment build-up was part of a regular updating of teaching aids, nor whether the equipment was acquired for viewing of other TV programs

as well as TEC. Moreover, staff in many similar schools may have had an equally strong desire to use TEC, but could not arrange the necessary investment.

The preparation of teachers to use TEC was another kind of investment that some schools undertook. According to the principals' reports about one percent of all surveyed schools, or 4-5 percent of adopter schools, undertook each of the following: (a) held pre-broadcast workshops for teachers whose classes would be viewing TEC, (b) held in-service teachers workshops, (c) consulted audio visual specialists, and (d) revised the reading curriculum (Table 35, columns 11C, D, E, and G). Teachers in about 5 percent of all schools or 20 percent of the adopters consulted reading specialists while planning for TEC (Column F). And finally, principals reported that about one-fifth of the adopter schools subscribed to the biweekly "Electric Company Newsletter" to keep teachers abreast of the series (Column I). Aside from these exceptions, it seems that most adopter schools began their first experience with TEC without special preparations for their teachers. Evidently, the series was generally considered to be manageable by teachers within their established competencies and curricula.

Although teacher preparation was not essential for use of TEC, some rearrangement of class schedules often was. About 12 percent of all schools or just over half of the adopting schools made special scheduling arrangements to facilitate viewing (Table 35, column 11H). A major problem in making these arrangements was finding time in the school program for the half-hour each week day when the show was being

broadcast. Not all schools could free up this time five days a week, and some may have found it undesirable to do so. As a consequence, the average viewer was tuned in about four days a week (Table 36). This is another measure of the intensiveness of utilization. By this measure it can be observed that it was in the areas that we called Middle America where arrangements for intensive multi-day viewing were most widely made, although the differences in this instance were not great.

It may be more important to note that, nationwide, arrangements were made for five-days-a-week viewing in a majority of the tuned in schools for all grade levels but the sixth (Table 37). In the sixth grade, 44 percent were five day users. For school grades above second, there was a smaller mode of two-days-a-week viewing for roughly 20 to 30 percent of the adopter schools. This was probably a tuesday/thursday arrangement designed for upper elementary students who either needed little help in reading skills or could not easily be taken away from their more advanced curricula in order to catch up on those skills. For first and second grades, scheduling arrangements produced a secondary mode of three-days-a-week viewing for about 15 percent of the tuned in schools. This was most likely a monday/wednesday/friday arrangement made feasible and desirable by the greater emphasis in these grades on basic reading skills. In short, the average age and grade of TEC in-school viewers seemed to vary somewhat by the days in the week. In any event, very few schools actually made room for four-days-a-week viewing, even though this was the nationwide average.

A final adjustment about which principals were questioned pertains to the extent to which pupils were regrouped outside of their regular classrooms for the purpose of viewing TEC. This regrouping sometimes took the form of "doubling up" of classes in a single classroom, and sometimes meant escorting one or more classes to an auditorium or some other large room. The significance of these different viewing contexts may not be as great as it once was, for the concept of the single, self-contained, one-teacher classroom has suffered a dual blow from open classroom advocates and from efficiency minded school planners. If anything, the doubled-up and auditorium contexts are probably indicative simply of large group viewing. In some cases, this was undoubtedly made necessary because of equipment that was either stationary or in usable but limited supply. Even where these conditions did not hold, large group viewing may have been deemed desirable in order to mix students, reduce supervisory personnel, or in some other way open up the standard closed classroom.

For whatever reasons, viewing in doubled up and auditorium contexts occurred frequently but did not predominate (compare Tables 38, 39, and 40). Most principals of adopter schools reported that their pupils were viewing TEC in the same way that they generally did most other school assignments, alone in their regular classrooms. This was true for all grade levels in the overall nationwide findings. Only three strata had adopter schools where most viewing took place outside of the regular classroom for three or more school grades. These were the Great Lakes-Plains region (grades 4, 5, and 6), medium sized or

suburban cities (grades 2, 3, 5, and 6), and low SES communities (grades 1, 2, and 3). Aside from these few instances, viewing generally took place in the familiar setting of the regular classroom.

To summarize, principals reported that first-year adoption entailed relatively little investment, preparation, or rearrangement of schedules or classes. Most adopter schools found TEC easily adaptable with minimal facilitation. Some schools did make special efforts to undertake these facilitating activities, and in doing so they often invested not only in TEC but also in the long run capabilities of their instructional resources. This may have been one of the more desirable side effects of TEC's appearance in Fall of 1971.

4.0 THE SPRING TEACHER SURVEY

The primary objective of the Spring 1972 survey of teachers was to identify the conditions under which pupils were viewing TEC during the series' first season. Therefore, only teachers who were using the series were surveyed. They not only provided in depth information on what was happening inside their classrooms, but were also a source of informed evaluations concerning the value and potential of TEC in the school program. In addition, the teacher questionnaire duplicated many of the questions about utilization levels that were asked of principals in the Fall survey. To facilitate interpretation of an otherwise bulky set of questions, all findings from the teacher questionnaire are reported as national estimates without breaking down by regional or community strata. For comparison, findings are reported for the subset of teachers who had primary responsibility for second grade pupils as well as for all surveyed teachers.

4.1 The Survey Design in Brief

In March of 1972, the teacher questionnaire was mailed to 517 teachers -- one teacher at each relevant grade level in each of the schools in which principals answering the Fall survey indicated that they had pupils viewing TEC. The list of teachers using TEC was provided by these principals. After three waves of mailed questionnaires and a telephone survey of the remaining non-respondents, an overall response rate of 96 percent was obtained. The entire survey was completed in early June.

The method of computing population estimates from the teacher's reports is described in Appendix D. Basically, adjustments were made for item non-response and for differences in the number of classes represented by each teacher. These procedures lend considerable confidence to the reliability of the findings.

There are always some questions about the validity of survey research findings. Respondents are asked to provide information without anyone present to observe and double-check the accuracy of what is said. In this study, it was possible to make some comparisons between the teacher and principal reports of utilization levels in the same set of adopter schools. The Fall survey of principals produced an estimate of 682,000 second graders viewing TEC in these schools. The Spring teacher survey produced a slightly lower estimate of 603,000 in the same schools. Comparisons for this and other grade levels are presented in Table 14 of Appendix D. Generally, the principals reported slightly higher viewing levels than did teachers. This discrepency may have been due to response bias on the part of either teachers or principals or both, although we cannot be sure of where, why, or even whether this bias occurred. In any event, the discrepency was not large enough to suggest that either estimate was greatly in error; indeed, we can feel fairly sure that the true viewing level was somewhere between the two estimates.

Principals and teachers differed in another respect, but this time the teacher estimates were higher. Principals reported that nationwide about 25 percent of all viewers in second grade were behind grade level in reading. Teachers reported that about 33 percent of

second grade viewers were behind grade level in reading. The differences between these findings may be due to slightly different definitions of what it means to be behind in reading. Teachers may apply harsher labels than the more diplomatic principals who, after all, do not have to grade children in most schools. Due to differences in perspectives, reports of target pupils viewing levels by both the principals and the teachers were probably valid from the perspective of the respondents. Most of the questions asked of the teachers were of a similar nature, requiring some judgement or definition of the situation by the respondent. For this reason the findings should always be interpreted as representing the perceptions of teachers or, in the case of the earlier utilization estimates, of principals.

The findings from the teacher questionnaire are presented in Appendix C in two sets, one for all teachers and another for second grade teachers only. Estimates for other grade levels are not presented because the number of teachers in the sample was too low in all grades but the second to permit stable, reliable estimates for each grade separately. Throughout the following analysis, most references to findings are for the all-teacher estimates. The second grade teachers generally did not differ from their colleagues in other grades by a very large margin. However, findings for the second grade teachers are noted in the discussion in those cases where a substantial difference from the all-teacher findings occurred. By substantial we mean, for example, a difference of more than three percentage points between the two sets of findings.

Each set of findings, for all teachers and for second grade teachers, is presented in the form of percentages, means, and other numerical estimates. This manner of data presentation simplifies interpretation by the reader, while minimizing the need for extensive commentary. The following discussion is further simplified by the fact that all findings were reported only for the United States rather than broken down by region or community strata. Wherever a finding is cited in the discussion, the reference to the data in Appendix C consists of a parenthetical note indicating the question or questions under consideration.

4.2 Viewing Conditions

The conditions under which pupils viewed TEC may be grouped within three broad categories: (1) the nature of the broadcast reception, including when, how, and how well the broadcast was received in the classroom; (2) the manner in which pupils were organized for viewing of TEC, including who was assigned to view it and how they behaved while viewing; (3) the place of TEC in the school program, particularly with reference to the course topics and teaching aids that TEC either supplemented or partially replaced. These three sets of conditions cover the physical and social environment of the classroom, as well as the larger context of educational programs and resources in which TEC was a component.

4.2.1 Reception of the Broadcast

High quality reception of TEC may not have been essential for TEC to be effective, but it probably helped. In terms of the quality

of reception, optimal viewing conditions probably were obtained wherever color sets having large screens received the broadcast without distortion, interference, garbeled audio, or other reception difficulties. The quality that color production adds to TEC, as to many other television shows, consists of more varied contrasts, easier identification of objects, and a richer and more appealing texture. Yet, only 5 percent of the teachers reported that their pupils were viewing TEC in color (Q. 7). The remaining 95 percent had pupils viewing in the austerity of black and white.

The mark of austerity was also present in the average size of television screens, which teachers reported to be about 21 inches (Q. 12). This seems closer to the scale of home receivers than to what might be ideally desired for classrooms. We do not know whether screens this small picturing a black and white broadcast risks some loss of pupil attentiveness, but it would seem important for educators to investigate and weigh this probability against the costs of larger color equipment.

A more obvious problem in the quality of reception was encountered by nearly a third of the teachers who reported that their TV sets were not always receiving or reproducing the signal well (Q. 10). About 10 percent attributed the problem to sets that did not work well, with 22 percent finding fault with poor "transmission" of the series. Many of these difficulties may have been due to the frequent use of "rabbit ears" as the only antenna. Some 42 percent of the teachers (but only 36 percent of the second grade teachers) reported using rabbit ears which are relatively weak receiving

devices, especially when they are deep inside a large building where electronic interference may be stronger than the desired broadcast signal. Only about 30 percent of the teachers reported use of antennas "on the school" itself, with the remaining 30 percent indicating a cable hook-up. These findings demonstrate a clear need for substantial investiment in reception equipment if instructional television is to become an efficient aid to teachers.

How the series was transmitted and received entailed some other aspects of interest. For example, all but one percent of the teachers reported using a single TV set at a time (Q. 11; the data are reported as means but may be translated into percentages if it is assumed, as we do, that distributions are dichotomous for virtually all cases). All but 9 percent of the teachers said that TEC could be viewed on only one channel during the school day (Q. 13). And all but 28 percent indicated that the channel on which pupils viewed TEC was in the VHF range between channels 2 and 13 (Q. 8). The relatively low use of the UHF range (above channel 13) may be more indicative of how school TV sets were equipped than how the series was broadcast, for a disproportionate share of educational television stations originally began broadcasting in the UHF range. It may be recalled that some of the principals answering the Fall questionnaire said that they were not using TEC because their schools had the standard VHF equipment and TEC was being broadcast on a UHF channel.

The time when TEC was being viewed in school depended largely on when the broadcasters aired the show. Only about one-fourth of the teachers said that the series was broadcast more than once during

the school day (Q. 14). Under these constraints, some 33 percent of all teachers and 38 percent of the second grade teachers used TEC between 1:00 and 2:00 p.m. The next most frequent viewing time was between 10:00 and 11:00 a.m. for 22 percent of the teachers. Next was 11:00 to 12:00 noon for 21 percent. Before 10:00 a.m. only 5 percent of all teachers were using TEC, and after 2:00 p.m. only 6 percent.

When asked to indicate the ideal time for viewing by their pupils, teachers said that they preferred the early or late hours more often than they actually used the series at these times (Q. 16). Some 10 percent said that viewing before 10:00 a.m. would be ideal, and about 14 percent stated an ideal time of 2:00 p.m. or later. Despite these preferences, it would not be wise as a matter of general policy to urge stations to shift broadcasting to earlier or later times. Most teachers preferred the mid-day broadcasts, and most were served by only one station broadcasting TEC at only one time. What seems to be called for here is not a general shift in broadcasting times, but more variety in numbers of different times per broadcast area.

4.2.2 Organization of the Student Viewers

Any classroom is a social organization having a membership, roles, rules, and most importantly a set of activities and behavior oriented toward accomplishing a task. The time period when TEC was being viewed constituted a segment of this organization which can be described in essentially the same terms as apply to the whole.

The teachers provided some information regarding the composition and social dynamics of this TEC segment.

In terms of composition, some 74 percent of the teachers said that all of the pupils for whom they had instructional responsibility viewed TEC (Q. 18). About 18 percent reported that they used the series just for those pupils who were having difficulty with reading, and only 3 percent said that the series was used for those pupils who were doing well in reading as a form of enrichment. Second grade teachers were more likely to have all of their pupils viewing, with 84 percent indicating this option as to who was viewing. In general, teachers simply opened their entire class to the viewing of TEC. Most teachers, about 55 percent, went even further and encouraged their pupils to view the series at home as well (Q. 17).[10]

Additional pupils were often included in the room when viewing took place. About a third of the teachers reported that their students were joined by pupils from other classes during TEC time (Q. 5). This produced an average audience size of about 34 children, or a little above the standard classroom size of roughly 25-30 (Q. 6). The actual viewing audience was not quite this large. Approximately 17 percent of all teachers and 11 percent of second grade teachers reported that there were other pupils in the room who were not assigned to view the series (Q. 28). This presented a very interesting situation in which the non-viewers could become distractions for the viewers.

[10] In this connection, it is worth noting that 88 percent of the teachers suggested evening broadcasts of TEC on the same day that students view it in school (Q. 36).

What were the non-viewers doing? Most teachers who had them in their rooms said that they were either reading individually (47 percent) or writing individually (35 percent), tasks that could be performed with no distraction and even while viewing (Q. 29). Only 14 percent of the teachers having official non-viewers said that they were engaged in the more potentially distractive activity of group work. This situation has the markings of an open classroom, where distraction is often intentionally risked in order to help teach self-guidance.

Actually, not many teachers insisted on the kind of formal, everyone-in-his-place atmosphere of the old school house. Only 25 percent said that their pupils must sit at their desks in their regular locations while viewing TEC (Q. 24). About 12 percent said that they must sit in chairs or on the floor in front of the television set. But fully 57 percent permitted students to arrange themselves in whatever way they felt most comfortable. Moreover, teachers rarely made lighting conditions adverse to reading, writing, or other activities. Only 3 percent made the room completely dark during TEC time, 20 percent made it considerably darker than usual, and the rest did little or nothing to darken the room (Q. 25). While bright rooms may have been necessary in rooms without shades, teachers probably had some choice in most instances.

Further indications of a generally relaxed atmosphere during TEC time can be noted in the tendency of students to become actively involved in the program. Teachers reported that on the average their students frequently repeated aloud words as they were presented, and

almost always sang along with the music from the program (Q. 27). Although the children very rarely wrote down words as they were presented, they even less rarely became bored, noisy beyond the teacher's tolerance, misbehaving, or inattentive. This signals more than a mood, but interactive participation as well.

One of the ways in which teachers encouraged attentiveness and involvement was through discussion before, during, or after TEC time. Just over 80 percent of the teachers felt that discussion prior to the broadcast helped their students to catch the message of the program (Q. 47). Slightly over 90 percent considered it helpful to hold discussions of the program immediately after TEC time (Q. 49). Most interestingly, a little more than 60 percent of the teachers said that discussion during the viewing time was helpful (Q. 48). It does not seem likely that teachers would consider these discussions helpful unless they had tried them, found them to work, and continued to have them. Such discussions made TEC a part of the instructional program, rather than an isolated experience.

4.2.3 The Context of the Instructional Program

Viewing and discussion time together consumed a fair share of the school day. Some adjustments in the school program were necessary to make room for this TEC segment. Asked what they did to create time, 48 percent of all teachers and 53 percent of the second grade teachers said that they had foresaken some of the time previously allocated to other forms of reading instruction (Q. 23). They evidently considered TEC a better means of achieving the same end,

at least on an experimental basis. About 42 percent of the teachers said that time was made available by taking some emphasis off of other subjects. Most surprisingly, 14 percent also said that some of the time previously allocated to recesses or lunch periods were used for TEC viewing. Perhaps during TEC's first season, schools found it preferable to make programmic changes in areas that were most flexible.

After these adjustments were made, TEC became the major means of televised instruction used by teachers who had pupils tuned in to the series. Teachers reported that on the average they had their typical pupil watching ITV 38 minutes during the typical day (Q. 52). Admittedly, we were asking a great deal of teachers to identify typical days and pupils, but if their reports are at all valid they indicate that most but not all of their ITV viewing time was devoted to TEC. For many teachers, this meant a shift from some other ITV programs to TEC. Approximately 17 percent said that they had used ITV at least once a day during the previous year, and another 36 percent had used ITV at least once a week (Q. 35). Our tabulations do not measure the degree to which teachers previously acquainted with other ITV programs found TEC to be more desirable. The findings do indicate that ITV was not new to most teachers using TEC, and that for many teachers the series had advantages over the standard ITV fare.

The classrooms into which TEC entered generally had some other modern instructional aids in regular use by students. For example, teachers using TEC reported that on the average their students were using audio tapes or records and video films or filmstrips 28

minutes each "typical" day (Q. 52). Programmed textbooks were used on the average 13 minutes a day. Together with these instructional aids, teachers reported an average of 68 minutes devoted to published texts, workbooks, or worksheets, together with an average of 32 minutes devoted to locally produced print materials. Overall, the electronically powered aids were used by the typical pupil for a little over an hour each school day, compared with just under two hours for the more conventional print materials. Presumably, most of the rest of the school day was devoted to discussion, recitation, games, and other basically oral procedures.

Viewing conditions may not have been as up to date as one might desire in terms of the quality of reception, but a surprisingly large proportion of user teachers were employing progressive notions about how to organize and provide resources to their students. The use of TEC in some schools where notions are not so deeply accepted may be a stimulant for further innovation in the direction of the modal TEC user school and classroom. TEC may, in other words, have a long run effect on the conditions under which it is viewed, helping to bring to fruition in some schools conditions that seem highly compatible with TEC in most schools. Whether TEC helps to stimulate this on-going movement toward more modern and resourceful educational methods must await our longitudinal study of user schools and classrooms.

4.3 Teachers: Who Adopted TEC?

The characteristics of teachers who were using TEC in their classrooms are interesting quite apart from how these teachers

organized their classrooms or what kind of equipment they used. In this section we consider how the decision to adopt TEC took place, the extent to which teachers were involved in this decision, the ways in which they became and were kept informed about TEC, and some of their basic characteristics as teachers.

Our findings on how the decision to adopt took place were not surprising to us. We had expected that during the first season of the series most adoptions would be the result of initiative on the part of individual teachers, with perhaps some checking and coordination with principals and other specialized staff. This is evidently what happened. Approximately 74 percent of the teachers said that they participated in the decision; 77 percent said that they were the party most responsible for the decision, and 79 percent claimed responsibility for the final decision to adopt (Q's. 19-21). Only in answer to the question of who participated did teachers indicate a substantial involvement of other staff. Some 47 percent said that principals of their schools participated in the decision, and 36 percent noted that other teachers in their schools also participated. With respect to who was most responsible for the decision or had final authority, roughly 10 percent of the teachers identified principals or a group of teacher colleagues in their schools. Other school personnel, from the board of education through reading specialists, were rarely if ever noted as participants. As we had expected during this first season, the teachers who used TEC were generally the same persons who decided to adopt it. However, we suspect that in subsequent years, it may prove necessary to elicit the participation of

other personnel in order to maintain TEC as a relatively stable feature of the school program.

Because teachers were generally the adopters, it is particularly important to know how they became informed about the existence of the series. Some 32 percent said that they learned about TEC from their principals prior to the first broadcast (Q. 42); 31 percent noted that another teacher had told them about the series. The only other source of information receiving a higher frequency of checks in the teacher questionnaire was the booklet, The Electric Company, checked by 55 percent of the teachers. In the 20 to 30 percent range were the half-hour TV preview, TV announcements, newspaper articles, and professional journals. These findings suggest that user teachers were probably informed by a number of sources in most cases, and that their own colleagues and principals were major sources of information. The value of multi-media approaches to teachers is fairly clearly demonstrated.

Only about one-half of the user teachers were kept informed about the content and development of TEC through the weekly "Guide to Shows," and most of these did not see the guide before every show (Q. 53). The in-school circulation system for routing the guide was evidently not always efficient. Approximately 46 percent of all teachers, and 56 percent of the second grade teachers, said that the Guide was first mailed to the school and then circulated among the relevant teachers (Q. 54). Only 24 percent of all teachers and 14 percent of those teaching second grade indicated that they were receiving a personal copy of the Guide through direct mailing to the teacher.

In terms of the formal qualifications of user teachers, we found that they were generally well experienced in teaching, were not new to the school where they were using TEC, and were relatively well trained for their teaching career. The average number of years of teaching experience among the user teachers was 12.3, just slightly less than the national average of 13.4 years for all public elementary school teachers in all schools (Q. 37).[11] On the average, user teachers had taught for 5.9 years in the same school where they were using TEC (Q. 38). Finally, 20 percent of the user teachers reported having received formal training through at least a master's degree (Q. 39). In comparison, a survey of all public elementary school teachers found that 16 percent had attained a master's degree.[12] On the basis of these findings, we have no reason to believe that user teachers were very different from non-users with respect to teaching experience and training.

4.4 The Teachers: Evaluations of TEC

The teachers who had pupils viewing TEC were generally experienced enough in both teaching and in the use of ITV to be qualifed as judges of TEC's merit in the classroom. Because they were the first to experiment with the series, their evaluations are particularly interesting. How did they grade the series?

[11] The 1966 national average for all teachers was reported in the 1970 Digest of Educational Statistics prepared by the National Center for Educational Statistics of the U.S. Office of Education, Table 52.

[12] This national percentage was also reported in the 1970 Digest, noted above.

It should first be noted that these teachers placed considerable confidence in the potential usefulness of television for the teaching of reading. Barely one percent said that ITV could have little or no use to them under ideal conditions (Q. 34). Fully 46 percent of all teachers and 52 percent of the second grade teachers felt that television could have great usefulness for the teaching of reading. TEC did not turn many teachers off to ITV. Instead, it seems to have sparked greater interest among them. Some 85 percent said that they had very favorable overall opinions of the series, and 43 percent said that their opinion was more favorable at the end of the school year than it was when they first saw the program (Q's 43 and 44). Only one percent were negative toward TEC, and only 7 percent had less favorable opinions at the end of the season than at the beginning. This indicates a substantial gain in approval by teachers who used the series throughout the year.

The teachers reported that their students responded with similarly favorable enthusiasm. Approximately 80 percent said that their pupils were very interested in the series, 17 percent noted slight interest among their pupils, and only one percent generally found disinterest among their pupils (Q. 45). In addition, 43 percent of all teachers said that student interest had increased over the season, and only 15 percent indicated a decline in student interest (Q. 46). We consider it unlikely that many other teaching aids or course sequence would score as well among the children who use them.

We also asked teachers to evaluate the series in terms of the effect that it had on the mastery of reading by pupils. Approximately 24 percent noted a great increase in reading interest by their typical pupils as a result of having viewed TEC (Q. 30). Another 64 percent noted a slight improvement in reading interest, and only 12 percent unhappily reported no change in reading interest. Less than one half of one percent perceived a decline in interest.

The general tendency of TEC to arouse student interest evidently had the desired consequence of increasing student reading abilities. About 28 percent of the teachers noted a great improvement in the ability of their typical pupils to decode words as a result of being tuned in to TEC (Q. 31). Similarly, 21 percent noted great improvement in the ability of their typical pupils to spell words (Q. 32). And finally, 33 percent found great improvement in basic sight vocabulary as a result of TEC viewing (Q. 33). Some gains, either great or slight, were reported by over 80 percent of the teachers for all three types of reading skills. Because these gains were directly attributed to TEC, they are accomplishments of which the theatrical troupe known as "The Electric Company" can be proud.

* * * * *

After all of the various minor and sometimes not-so-minor problems of getting TEC into the classroom, and despite numerous difficulties with the reception or the equipment, in the end the series inspired confidence among most teachers, enthusiasm among most viewers, and most importantly greater interest and competency

in reading among students. These evaluations by teachers may sometimes credit TEC where the teachers or pupils themselves were really due the credit, but then the purpose of an instructional aid such as TEC is to give focus to the efforts of people. This TEC evidently did quite well.

DRAFT

5.0 PREVIEW OF FUTURE RESEARCH

The first season of "The Electric Comp. .y" may be considered a highly successful experimental partnership between producers, sponsors, broadcasters, and the schools, and their staff and students. The first season was also an experiment for those of us who were involved in the survey of in-school utilization patterns. We know of no comparable national survey of where and how a school innovation was being used. Most of what is known about educational innovation derives from case studies, small area surveys, unrepresentative or non-random sample surveys of the membership of national associations, or general state and national surveys of school resources. By producing the survey reported in this document, the Children's Television Workshop pioneered in the development of a thorough nationwide sample survey of schools and teachers using a specific new instructional aid.

The success of this survey may be measured in several ways. First, there is the confidence that we can place in the reliability of the findings due to the professional skills that the Research Triangle Institute applied to the tasks of sampling and estimation. Secondly, the findings covered more topics and uncovered more issues than was originally anticipated for the survey. And finally, through the cooperation of principals and teachers who were asked to provide detailed information, a sufficiently high response rate was obtained to permit basic estimates indicating TEC's widespread and enthusiastic acceptance.

Yet, we learned much from the first year survey that should be directed toward improvements in the second year survey. Some unexpected sampling and response problems occurred. A few issues emerged that merit closer scrutiny, particularly with respect to questions about how and why TEC was being used. More respondents giving information about more issues would also facilitate more elaborate data analysis. Changes along these lines should also be placed within the context of a study designed to compare first year utilization patterns with those of the second year. These concerns are outlined below in a preview of our plans for the design and objectives of the second year survey during the 1972-73 school year.

The second year survey offers a unique opportunity to assess changes in utilization levels and patterns from the first year that an innovation was available to the second year. Some overall increase in utilization might be expected, and we will determine the extent to which this happens. More interesting is the issue of which types of schools were late adopters, which types dropped the series from their school programs, which types remained uninitiated, and which types were steadfast users. This is essentially a question of identifying trends in the patterns of diffusion. For example, do schools in urban areas become increasingly saturated before adoption levels in rural areas pick up substantially? Does experience with TEC lead to more selective utilization in target schools, by slow readers, in certain grade levels, and in low SES areas?

Related to this issue is the question of information penetration. Will schools in the second year generally have more information

about TEC? Where will the new second year users get their information? Taking a lesson from the first year survey, we will also ask two-time non-adopters what kind of information they think they need before they can make a decision. And we will also ask those who dropped the series whether they had received unfavorable reports about the series, as well as learn the source of those reports. In short, we will trace the flow of communications as they affect the fate of innovation in schools.

The current report placed heavy emphasis on deficiencies in the technical capabilities of schools. This was because most of the non-user schools cited deficiencies of various kinds as reasons for not adopting the series. Two changes should be made to clarify and possibly expand on this theme. First, we can have school principals and teachers define the nature of their capabilities or deficiencies more precisely; e.g., whether the problem was due to antennas, sets, or broadcasting limitations. Secondly, we will assess the extent to which investments were made in equipment in order to use TEC, and what kind of investments technically deficient non-users consider to be of highest priority. This will permit us to measure what schools are able and willing to do to overcome deficiencies.

In one sense, the emphasis on technology in the first year study may have been misplaced. We noted that many principals may have used technical deficiencies as a diplomatic excuse. More information should be gathered about the probable pedagogical reasons that underlie non-adoption by some schools and adoption by others. This will take some delicacy in framing questions having non-negative connotations regarding different kinds of pedagogical values. It

will also require framing questions that do not permit easy attribution of non-adoption to technical considerations. An important and informative bonus for investigating educational values and ideologies is that it would allow some comparison of adopters with non-adopters in terms of the kinds of methods and objectives that they consider sound.

Related to pedagogy is the larger issue of school modernization, and on this too the second year survey will provide a unique opportunity to measure development over time. Will the early adopters of TEC move on to develop a more modern program in other areas of the curriculum as well? Will those who drop TEC differ in this respect from the steadfast users? Teachers may be most informative on this matter, for they can tell us whether the series stimulated them to make any changes in the program, resources used, organization of students, or objectives of their teaching other than the changes that may have occurred during TEC time itself.

One of the most modern, or at least most talked about developments in schooling today has been the often vague notion of an "open classroom." Certain aspects of this development gave us problems in the 1971-72 survey. For example, where students were team taught or flowed from teacher to teacher it was difficult to identify which students were the responsibility of a particular teacher who answered our questionnaire. We will insert some questions designed to flag these relatively rare situations. We will also attempt to develop a brief set of questions designed to scale classroom "openness" along one or more dimensions, so that this too can be used as an identifying

characteristic of adopter or non-adopter schools as the case may be. Since much of the notion of openness entails certain relationships between teacher and pupil, we will have some idea of what kinds of relationships tend to occur in classrooms where TEC is used.

The issue of target pupil viewing, or in some areas non-viewing, needs further exploration. In this case, what is needed are questions designed to find out why schools are using TEC. The same questions might be useful for determining why private schools had relatively low adoption levels during the first year and perhaps during the second.

Many of the issues noted here can only be analyzed with assurance of reliability if the sample size is greatly increased over that of the first year. Any extensive analysis of the teacher questionnaire findings will most certainly require a larger school sample, for we can only reach teachers after principals have told us who they are. This procedure will require a minimum of two mailed surveys, one to principals and one to teachers with provision for non-response in each survey. The problem of sample size will be even greater during Year Two than it was during Year One, when we will wish to make separate tabulations for first year users only, second year users only, both year users, and two-time non-users. To facilitate the attainment of these objectives, we will be employing a large sample three-stage research design.

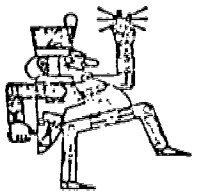
The first stage will consist of a November 1972 postcard survey of principals in 15,000 randomly sampled public and private schools containing grade 2, 3, or 4. The postcard will ask principals whether their schools were using TEC during its first season and during

its second season. Two-year users will then receive a special questionnaire to assess more thoroughly the extent of utilization, equipment available, sources of information, and so forth. Similarly, principals in each of the other three year-one, year-two categories will also receive special questionnaires keyed to the kind of issues raised by whether they were new adopters, early adopters who dropped the series, or two-time non-users. All sampled principals will be asked to provide the names of teachers who are using the series, and during the Spring of 1973 in turn these teachers will be mailed special questionnaires keyed to the year or years when they had their children tuned in.

It is expected that the entire Year Two study will produce extensive information about school development and innovation, even though it is primarily focused on only the single phenomenon of "The Electric Company."

DRAFT

APPENDIX A. THE FALL 1971 SCHOOL QUESTIONNAIRE



CHILDREN'S TELEVISION WORKSHOP 1 LINCOLN PLAZA, NEW YORK, N.Y. 10023 (212) 595-3456

Dear Principal:

On October 25, 1971, the Children's Television Workshop, producers of Sesame Street, inaugurated a new television series, one designed for viewing at home or school by children between the ages of seven and ten. This new program, which we call The Electric Company, is being carried by more than 200 television stations located in all areas of the United States.

May I ask your assistance in helping us to learn something about the problems which schools are encountering in attempting to utilize this new instructional approach? The questionnaire presented on pages 2-4 of this letter is quite brief and has been designed both for schools which currently are viewing The Electric Company and for those which are not. A pre-addressed, stamped envelope is provided to return this questionnaire to the Research Triangle Institute, which is conducting this survey for us.

Your candid answers to these questions will be of great value to us in our efforts to better meet the reading needs of American children. Thank you for your assistance.

Sincerely yours,

Joan Ganz Cooney
President

PLEASE SUPPLY THE FOLLOWING INFORMATION BEFORE CONTINUING

A. Type of school (PLEASE CHECK ONE):

- ☐ a. Public
- ☐ b. Private, Roman Catholic
- ☐ c. Private, other religious denomination
- ☐ d. Private, non-demoninational

B. Grade range of school (PLEASE CIRCLE THOSE GRADES WHICH EXIST IN THIS SCHOOL):

N K 1 2 3 4 5 6 7 8 9 10 11 12

THIS QUESTIONNAIRE IS INTENDED ONLY FOR SCHOOLS CONTAINING AT LEAST ONE OF GRADES 1, 2, 3, 4, 5, or 6. IF THIS SCHOOL DOES NOT CONTAIN AT LEAST ONE OF THESE GRADES, PLEASE CHECK HERE ☐ AND RETURN THE QUESTIONNAIRE UNANSWERED. IF THIS SCHOOL CONTAINS AT LEAST ONE OF THESE GRADES, PLEASE TURN TO QUESTION 1 WHICH IS LOCATED AT THE TOP OF PAGE 2.

1. How many classrooms does THIS SCHOOL contain? ___ classrooms

2. How many television sets are currently available for INSTRUCTIONAL USE in this school? ___ TV sets

3. Approximately how many television channels (both commercial and educational) can currently be received IN THE VIEWING AREA in which this school is located?
___ channels

BEFORE ANSWERING QUESTION 4 PLEASE CIRCLE EACH GRADE WHICH EXISTS IN THIS SCHOOL AND ANSWER ALL PARTS OF THIS QUESTION FOR EACH GRADE CIRCLED.

	Grade					
	1st	2nd	3rd	4th	5th	6th
4. a. How many PUPILS are currently enrolled in each grade circled? →	___	___	___	___	___	___
b. Approximately what percent (%) of the pupils in each grade circled ...						
(1) are below grade level in READING skills? →	___%	___%	___%	___%	___%	___%
(2) are from families with an annual income of less than $3,000? →	___%	___%	___%	___%	___%	___%
(3) come from homes where Spanish is spoken? →	___%	___%	___%	___%	___%	___%
(4) are taught by teachers who speak to them primarily in Spanish (excluding foreign language classes)? →	___%	___%	___%	___%	___%	___%

5. Before receiving this questionnaire had you ever heard of the new television series called The Electric Company?

☐ Yes (PLEASE CONTINUE WITH QUESTION 6)

☐ No (PLEASE SKIP TO QUESTION 7)

6. In which of the following ways have you heard of The Electric Company? (PLEASE CHECK AS MANY AS APPLY)

☐ a. By listening to a TV talk show
☐ b. By watching the 1/2 hour TV preview
☐ c. From radio announcements
☐ d. From TV announcements
☐ e. From newspaper articles
☐ f. From magazine articles
☐ g. From a direct mailing by the Children's Television Workshop
☐ h. From a professional colleague
☐ i. From a friend
☐ j. From the children in my school
☐ k. From a booklet called The Electric Company

7. Are any of the pupils in grades 1-6 of this school currently viewing The Electric Company AT SCHOOL as a part of their regular school program?

☐ Yes (PLEASE CONTINUE WITH QUESTION 8)

☐ No (PLEASE SKIP TO QUESTION 13)

BEFORE ANSWERING QUESTION 8 PLEASE CIRCLE EACH GRADE IN WHICH PUPILS ARE VIEWING THE ELECTRIC COMPANY AT SCHOOL. PLEASE ANSWER ALL PARTS OF QUESTIONS 8, 9, AND 10 FOR EACH GRADE CIRCLED.

	Grade					
	1st	2nd	3rd	4th	5th	6th
8. a. How many PUPILS in each grade circled are viewing The Electric Company AT SCHOOL? →						
b. Approximately what percent (%) of these viewing pupils . . .						
(1) are below grade level in READING skills? →	___%	___%	___%	___%	___%	___%
(2) are from families with an annual income of less than $3,000? →	___%	___%	___%	___%	___%	___%
(3) come from homes where Spanish is spoken? →	___%	___%	___%	___%	___%	___%
9. In what setting(s) do pupils in each grade view The Electric Company AT SCHOOL? (PLEASE CHECK THE APPROPRIATE BOX(ES) IN EACH RELEVANT COLUMN)						
a. In their regular classroom →	☐	☐	☐	☐	☐	☐
b. By "doubling-up" in the classrooms with a TV set →	☐	☐	☐	☐	☐	☐
c. In an auditorium or other large room →	☐	☐	☐	☐	☐	☐
10. How many days per week (d/w) do pupils in each grade view The Electric Company AT SCHOOL? →	___d/w	___d/w	___d/w	___d/w	___d/w	___d/w

11. Which of the following activities have been undertaken BY THIS SCHOOL in order to facilitate the viewing of The Electric Company? (PLEASE BE CANDID AND CHECK AS MANY ACTIVITIES AS APPLY)

- ☐ a. TV equipment was borrowed.
- ☐ b. TV equipment was purchased.
- ☐ c. Workshops were held earlier for teachers whose classes would be viewing The Electric Company.
- ☐ d. In-service workshops are now being held for teachers whose classes are viewing The Electric Company.
- ☐ e. Audio-visual specialists were consulted.
- ☐ f. Reading specialists were consulted.
- ☐ g. Our reading curriculum was revised.
- ☐ h. Special scheduling arrangements were made so that pupils could view the program.
- ☐ i. Our school subscribed to the biweekly "Electric Company Newsletter."
- ☐ j. Other (PLEASE SPECIFY) _____
- ☐ k. None of the above activities was undertaken.

PLEASE TURN TO PAGE 4 AND ANSWER QUESTION 12.

12. Later this year, we will select a random sample of the teachers whose pupils have been viewing The Electric Company (TEC) as a part of their formal instructional program and ask them to identify problems which they have experienced in using the program. Please supply us with the information asked for below so that your teachers will have a chance of being selected to participate in our study. (PLEASE CONTINUE ON AN ADDITIONAL SHEET OF PAPER IF NECESSARY.)

	Name of Teacher (PLEASE PRINT)	Grade Taught	No. of Pupils Taught	No. of Pupils Viewing TEC At School
1.	_____	_____	_____	_____
2.	_____	_____	_____	_____
3.	_____	_____	_____	_____
4.	_____	_____	_____	_____
5.	_____	_____	_____	_____
6.	_____	_____	_____	_____
7.	_____	_____	_____	_____
8.	_____	_____	_____	_____

PLEASE STOP HERE AND RETURN THE QUESTIONNAIRE. THANK YOU FOR YOUR COOPERATION.

---

13. Which of the following reasons help to explain why pupils in this school currently are not viewing The Electric Company AT SCHOOL? (PLEASE BE CANDID AND CHECK AS MANY REASONS AS APPLY TO YOUR SITUATION.)

- ☐ a. The program is not being shown on a television channel which can be received by this school.
- ☐ b. Our TV receivers are primarily VHF and the signal for The Electric Company is UHF.
- ☐ c. Our TV receivers are not of sufficient quantity to make instructional viewing feasible.
- ☐ d. Our TV receivers are not of sufficient quality to make instructional viewing feasible.
- ☐ e. We believe that television is not a very useful medium for instruction in reading.
- ☐ f. We consider the content of The Electric Company to be inappropriate for our instructional needs.
- ☐ g. We would prefer to have our pupils view a television program of local origin rather than one which is produced elsewhere.
- ☐ h. Our teachers lack sufficient experience to utilize a television approach to the teaching of reading.
- ☐ i. Sufficient time was not available to revise our instructional schedule before the program began.
- ☐ j. We have not obtained enough advanced information about The Electric Company to arrive at a decision regarding the desirability of using it in our school.
- ☐ k. Before receiving this questionnaire none of our teachers had heard about The Electric Company.
- ☐ l. Other (PLEASE SPECIFY) _____

PLEASE RETURN THE QUESTIONNAIRE. THANK YOU FOR YOUR COOPERATION.

DRAFT

APPENDIX B

TABLES PRESENTING FALL 1971 FINDINGS

TABLE 1. PERCENT OF ELEMENTARY SCHOOL PRINCIPALS WHO IN THE FALL OF 1971 IDENTIFIED VARIOUS WAYS IN WHICH THEY HAD HEARD OF THE ELECTRIC COMPANY, FOR THE UNITED STATES AND BY REGION, SIZE AND SES OF COMMUNITY

	RESPONSE TO QUESTION 5 OR 6*											
	5Y	6A	6B	6C	6D	6E	6F	6G	6H	6I	6J	6K
UNITED STATES	67%	18%	19%	6%	32%	30%	23%	34%	20%	9%	4%	35%
BY REGION												
NORTH ATLANTIC	76%	17%	24%	6%	36%	31%	24%	46%	20%	9%	7%	45%
GREAT LAKES & PLAINS	71%	27%	25%	9%	42%	39%	31%	35%	31%	14%	4%	34%
WEST & SOUTHWEST	67%	10%	12%	5%	28%	26%	18%	27%	14%	9%	4%	36%
SOUTHEAST	51%	14%	13%	4%	17%	17%	18%	25%	12%	4%	3%	22%
BY SIZE OF COMMUNITY**												
LARGE CITY	81%	23%	31%	9%	39%	41%	20%	48%	28%	16%	8%	51%
MEDIUM CITY	79%	19%	35%	5%	38%	42%	26%	45%	21%	13%	4%	49%
SMALL CITY	72%	18%	18%	4%	34%	24%	27%	42%	19%	6%	3%	42%
OTHER	60%	20%	13%	7%	30%	28%	28%	27%	16%	9%	2%	31%
BY SES OF COMMUNITY**												
HIGH	70%	20%	23%	7%	35%	32%	29%	38%	21%	11%	4%	41%
LOW	71%	19%	15%	5%	30%	29%	19%	37%	16%	9%	4%	38%

*SEE ITEMS 7 AND 11 OF THE QUESTIONNAIRE FOR THE EXACT WORDING OF EACH RESPONSE ALTERNATIVE.

**PUBLIC SCHOOLS ONLY.

TABLE 2. PERCENT OF ELEMENTARY SCHOOL PRINCIPALS WHO GAVE VARIOUS REASONS FOR WHY NO PUPILS IN THEIR SCHOOLS WERE VIEWING THE ELECTRIC COMPANY AT SCHOOL DURING THE FALL OF 1971, FOR THE UNITED STATES AND BY REGION, SIZE AND SES OF COMMUNITY

	RESPONSE TO QUESTION 7 OR 13*												
	7N	13A	13B	13C	13D	13E	13F	13G	13H	13I	13J	13K	13L
UNITED STATES	77.2	18.0	5.7	18.9	8.3	2.6	1.7	2.2	10.5	9.5	22.9	16.6	31.1
BY REGION													
NORTH ATLANTIC	72.0	7.8	5.8	14.0	6.3	2.4	1.7	1.7	6.3	13.4	15.6	14.4	29.6
GREAT LAKES & PLAINS	78.9	19.1	4.5	27.5	9.6	2.4	3.9	3.6	13.4	8.1	33.3	21.8	32.1
WEST & SOUTHWEST	72.2	10.3	3.8	12.5	4.5	1.0	0.1	1.1	6.8	8.5	17.8	12.2	27.7
SOUTHEAST	86.4	36.8	9.4	19.2	13.3	4.9	0.5	1.8	15.0	8.4	21.5	16.4	35.3
BY SIZE OF COMMUNITY**													
LARGE CITY	50.1	6.2	2.4	8.3	5.0	1.9	2.0	3.8	6.8	7.7	15.4	8.0	18.7
MEDIUM CITY	71.1	5.3	10.0	24.9	8.2	2.6	4.7	2.7	7.6	13.0	14.2	6.7	28.6
SMALL CITY	80.2	10.7	1.6	12.6	5.2	1.7	1.7	0.7	5.4	11.8	12.5	4.5	40.6
OTHER	86.2	33.1	9.5	25.9	14.4	3.7	1.7	2.2	17.7	8.4	34.1	22.3	33.6
BY SES OF COMMUNITY**													
HIGH	75.5	15.2	6.4	19.6	8.5	2.9	1.6	2.3	11.8	10.2	23.4	12.1	33.8
LOW	74.1	24.3	4.5	15.4	10.6	2.0	3.3	2.0	8.4	8.6	17.9	13.3	27.0

*SEE ITEMS 7 AND 13 OF THE QUESTIONNAIRE FOR THE EXACT WORDING OF EACH RESPONSE ALTERNATIVE.

**PUBLIC SCHOOLS ONLY.

In the computation for this table schools that were using "The Electric Company" were treated as non-respondents with respect to question 13. For a discussion of this procedure see Appendix D.

TABLE 3. PERCENT OF ELEMENTARY SCHOOL PRINCIPALS IN AREAS WHERE THE ELECTRIC COMPANY COULD BE RECEIVED WHO GAVE VARIOUS REASONS FOR WHY NO PUPILS IN THEIR SCHOOLS WERE VIEWING THE PROGRAM AT SCHOOL DURING THE FALL OF 1971, FOR THE UNITED STATES AND BY REGION, SIZE AND SES OF COMMUNITY

	RESPONSE TO QUESTION 7 OR 13*												
	7N	13A	13B	13C	13D	13E	13F	13G	13H	13I	13J	13K	13L
UNITED STATES	73.9	0.0	2.2	15.1	4.6	1.8	2.7	1.2	8.4	8.0	19.7	12.5	35.6
BY REGION													
NORTH ATLANTIC	70.4	0.0	2.0	12.2	4.9	2.4	1.7	1.7	7.2	13.8	16.8	14.4	31.0
GREAT LAKES & PLAINS	76.1	0.0	3.3	23.3	6.4	2.8	7.0	1.6	11.9	6.9	31.6	15.6	35.7
WEST & SOUTHWEST	69.7	0.0	2.3	10.7	2.8	0.5	***	1.1	6.8	7.9	15.0	12.6	28.2
SOUTHEAST	79.8	0.0	0.5	11.2	3.7	1.1	0.6	0.0	6.5	3.2	9.8	5.1	50.6
BY SIZE OF COMMUNITY**													
LARGE CITY	48.8	0.0	3.8	8.9	4.3	2.1	2.0	3.8	7.1	7.1	13.4	6.3	19.2
MEDIUM CITY	71.0	0.0	8.5	22.3	8.0	3.6	4.8	2.7	7.7	10.9	13.0	4.1	30.0
SMALL CITY	77.8	0.0	1.1	9.8	4.0	1.6	1.7	0.7	5.4	12.0	12.5	5.9	43.8
OTHER	80.5	0.0	0.8	15.8	4.7	1.3	4.8	0.3	9.4	4.9	26.9	10.0	42.6
BY SES OF COMMUNITY**													
HIGH	73.3	0.0	1.8	14.3	3.0	1.6	2.0	1.2	8.0	8.4	20.0	6.9	39.9
LOW	68.5	0.0	3.9	11.5	9.2	2.4	6.6	2.0	6.8	7.4	14.4	8.4	28.3

*SEE ITEMS 7 AND 13 OF THE QUESTIONNAIRE FOR THE EXACT WORDING OF EACH RESPONSE ALTERNATIVE.

**PUBLIC SCHOOLS ONLY.

***ESTIMATE LESS THAN 0.1%.

In the computation for this table schools that were using "The Electric Company" were treated as non-respondents with respect to question 13. For a discussion of this procedure see Appendix D.

TABLE 4. PERCENT OF ELEMENTARY SCHOOL PRINCIPALS (IN AREAS WHERE THE ELECTRIC COMPANY WAS BEING SHOWN AND WHERE TV SETS WERE AVAILABLE IN SUFFICIENT QUANTITY AND QUALITY) WHO GAVE VARIOUS REASONS FOR WHY NO PUPILS IN THEIR SCHOOLS WERE VIEWING THE ELECTRIC COMPANY AT SCHOOL DURING THE FALL OF 1971, FOR THE UNITED STATES AND BY REGION, SIZE AND SES OF COMMUNITY

	RESPONSE TO QUESTION 7 OR 13*												
	7N	13A	13B	13C	13D	13E	13F	13G	13H	13I	13J	13K	13L
UNITED STATES	55.5	0.0	0.0	0.0	0.0	1.1	4.2	0.7	3.1	9.4	23.1	12.8	27.0
BY REGION													
NORTH ATLANTIC	53.2	0.0	0.0	0.0	0.0	0.5	1.7	1.6	5.8	11.9	31.2	20.4	27.5
GREAT LAKES & PLAINS	61.3	0.0	0.0	0.0	0.0	2.5	11.0	0.4	3.1	7.4	27.1	9.7	23.9
WEST & SOUTHWEST	44.0	0.0	0.0	0.0	0.0	0.1	0.0	0.5	2.3	11.9	19.1	14.5	13.2
SOUTHEAST	62.3	0.0	0.0	0.0	0.0	0.8	1.0	0.0	***	6.3	9.8	5.6	48.3
BY SIZE OF COMMUNITY**													
LARGE CITY	29.6	0.0	0.0	0.0	0.0	1.6	0.9	2.7	2.9	5.2	8.4	4.4	17.4
MEDIUM CITY	59.6	0.0	0.0	0.0	0.0	0.8	5.1	0.0	0.6	22.8	11.3	9.8	38.6
SMALL CITY	51.9	0.0	0.0	0.0	0.0	2.2	4.2	1.0	2.8	15.0	15.7	2.3	29.1
OTHER	61.0	0.0	0.0	0.0	0.0	0.9	7.8	0.0	3.4	8.3	21.1	4.5	28.2
BY SES OF COMMUNITY**													
HIGH	52.1	0.0	0.0	0.0	0.0	1.5	2.8	1.2	3.2	12.1	17.9	4.6	27.9
LOW	51.1	0.0	0.0	0.0	0.0	1.0	10.7	0.0	1.8	9.2	10.8	4.4	26.5

*SEE ITEMS 7 AND 13 OF THE QUESTIONNAIRE FOR THE EXACT WORDING OF EACH RESPONSE ALTERNATIVE.

**PUBLIC SCHOOLS ONLY.

***ESTIMATE LESS THAN 0.1%.

In the computation for this table, schools that were using "The Electric Company" were treated as non-respondents with respect to question 13. For a discussion of this procedure see Appendix D.

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TABLE 5. AVERAGE NUMBER OF TELEVISION CHANNELS WHICH COULD BE RECEIVED IN THE FALL OF 1971 IN THE VIEWING AREA OF SCHOOLS CONTAINING GRADES 2, 3, OR 4, FOR THE UNITED STATES AND BY REGION, SIZE AND SES OF COMMUNITY

	TELEVISION CHANNELS
UNITED STATES	4.64
BY REGION	
NORTH ATLANTIC	5.66
GREAT LAKES & PLAINS	4.20
WEST & SOUTHWEST	4.39
SOUTHEAST	3.90
BY SIZE OF COMMUNITY*	
LARGE CITY	5.32
MEDIUM CITY	4.78
SMALL CITY	4.62
OTHER	3.88
BY SES OF COMMUNITY*	
HIGH	4.55
LOW	4.37

*PUBLIC SCHOOLS ONLY.

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TABLE 6. AVERAGE NUMBER OF TELEVISION SETS PER CLASSROOM AVAILABLE FOR INSTRUCTIONAL USE DURING THE FALL OF 1971 IN SCHOOLS CONTAINING GRADES 2, 3, OR 4 FOR THE UNITED STATES AND BY REGION, SIZE AND SES OF COMMUNITY

	TELEVISION SETS PER CLASSROOM
UNITED STATES	0.256
BY REGION	
NORTH ATLANTIC	0.388
GREAT LAKES & PLAINS	0.168
WEST & SOUTHWEST	0.183
SOUTHEAST	0.293
BY SIZE OF COMMUNITY*	
LARGE CITY	0.307
MEDIUN CITY	0.486
SMALL CITY	0.233
OTHER	0.174
BY SES OF COMMUNITY*	
HIGH	0.284
LOW	0.230

*PUBLIC SCHOOLS ONLY.

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TABLE 7. NUMBER OF TELEVISION SETS PER CLASSROOM AVAILABLE FOR INSTRUCTIONAL USE DURING THE FALL OF 1971 IN SCHOOLS CONTAINING GRADES 2, 3, OR 4 WHERE THE ELECTRIC COMPANY WAS BEING VIEWED BY SOME PUPILS, FOR THE UNITED STATES AND BY REGION, SIZE AND SES OF COMMUNITY

	TELEVISION SETS PER CLASSROOM
UNITED STATES	0.445
BY REGION	
NORTH ATLANTIC	0.723
GREAT LAKES & PLAINS	0.255
WEST & SOUTHWEST	0.300
SOUTHEAST	0.407
BY SIZE OF COMMUNITY*	
LARGE CITY	0.346
MEDIUM CITY	0.495
SMALL CITY	0.317
OTHER	0.386
BY SES OF COMMUNITY*	
HIGH	0.394
LOW	0.319

*PUBLIC SCHOOLS ONLY.

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TABLE 8. NUMBER OF TELEVISION SETS PER CLASSROOM AVAILABLE FOR INSTRUCTIONAL USE DURING THE FALL OF 1971 IN SCHOOLS CONTAINING GRADES 2, 3, OR 4 WHERE THE ELECTRIC COMPANY WAS NOT BEING VIEWED BY ANY PUPILS, FOR THE UNITED STATES AND BY REGION, SIZE AND SES OF COMMUNITY

	TELEVISION SETS PER CLASSROOM
UNITED STATES	0.190
BY REGION	
NORTH ATLANTIC	0.200
GREAT LAKES & PLAINS	0.136
WEST & SOUTHWEST	0.147
SOUTHEAST	0.287
BY SIZE OF COMMUNITY*	
LARGE CITY	0.289
MEDIUM CITY	0.174
SMALL CITY	0.208
OTHER	0.132
BY SES OF COMMUNITY*	
HIGH	0.196
LOW	0.199

*PUBLIC SCHOOLS ONLY.

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TABLE 9. NUMBER OF SCHOOLS WHERE SOME PUPILS VIEWED THE ELECTRIC COMPANY AT SCHOOL AS A PART OF THEIR REGULAR SCHOOL PROGRAM DURING THE FALL OF 1971, FOR THE UNITED STATES AND BY REGION, SIZE AND SES OF COMMUNITY

	NUMBER OF SCHOOLS
UNITED STATES	18811
BY REGION	
NORTH ATLANTIC	5347
GREAT LAKES & PLAINS	5371
WEST & SOUTHWEST	5745
SOUTHEAST	2348
BY SIZE OF COMMUNITY*	
LARGE CITY	7041
MEDIUM CITY	2388
SMALL CITY	3697
OTHER	3643
BY SES OF COMMUNITY*	
HIGH	11683
LOW	5087

*PUBLIC SCHOOLS ONLY.

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TABLE 10. PERCENT OF SCHOOLS WHERE SOME PUPILS VIEWED THE ELECTRIC COMPANY AT SCHOOL AS A PART OF THEIR REGULAR SCHOOL PROGRAM DURING THE FALL OF 1971, FOR THE UNITED STATES AND BY REGION, SIZE AND SES OF COMMUNITY

	PERCENT OF SCHOOLS
UNITED STATES	22.81%
BY REGION	
NORTH ATLANTIC	27.95%
GREAT LAKES & PLAINS	21.14%
WEST & SOUTHWEST	27.84%
SOUTHEAST	13.58%
BY SIZE OF COMMUNITY*	
LARGE CITY	49.87%
MEDIUM CITY	28.87%
SMALL CITY	19.79%
OTHER	13.81%
BY SES OF COMMUNITY*	
HIGH	24.45%
LO	25.86%

*PUBLIC SCHOOLS ONLY.

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TABLE 11. PERCENT OF SCHOOLS (IN AREAS WHERE THE ELECTRIC COMPANY WAS BEING SHOWN) WHERE SOME PUPILS VIEWED THE PROGRAM AT SCHOOL AS A PART OF THEIR REGULAR SCHOOL PROGRAM DURING THE FALL OF 1971, FOR THE UNITED STATES AND BY REGION, SIZE AND SES OF COMMUNITY

	PERCENT OF SCHOOLS
UNITED STATES	26.1
BY REGION	
NORTH ATLANTIC	29.6
GREAT LAKES & PLAINS	23.9
WEST & SOUTHWEST	30.3
SOUTHEAST	20.2
BY SIZE OF COMMUNITY*	
LARGE CITY	51.2
MEDIUM CITY	29.0
SMALL CITY	22.2
OTHER	19.5
BY SES OF COMMUNITY*	
HIGH	26.7
LOW	31.5

*PUBLIC SCHOOLS ONLY.

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TABLE 12. PERCENT OF SCHOOLS (IN AREAS WHERE THE ELECTRIC COMPANY WAS BEING SHOWN AND WHERE AT LEAST ONE TV SET WAS AVAILABLE) WHERE SOME PUPILS VIEWED THE PROGRAM AT SCHOOL AS A PART OF THEIR REGULAR SCHOOL PROGRAM DURING THE FALL OF 1971, FOR THE UNITED STATES AND BY REGION, SIZE AND SES OF COMMUNITY

	PERCENT OF SCHOOLS
UNITED STATES	37.1
BY REGION	
NORTH ATLANTIC	36.3
GREAT LAKES & PLAINS	30.0
WEST & SOUTHWEST	48.5
SOUTHEAST	36.2
BY SIZE OF COMMUNITY*	
LARGE CITY	64.2
MEDIUM CITY	33.5
SMALL CITY	41.1
OTHER	29.4
BY SES OF COMMUNITY*	
HIGH	39.2
LOW	42.8

*PUBLIC SCHOOLS ONLY.

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TABLE 13. PERCENT OF SCHOOLS (IN AREAS WHERE THE ELECTRIC COMPANY WAS BEING SHOWN AND WHERE TV SETS WERE AVAILABLE IN SUFFICIENT QUANTITY AND QUALITY) WHERE SOME PUPILS VIEWED THE PROGRAM AT SCHOOL AS A PART OF THEIR REGULAR SCHOOL PROGRAM DURING THE FALL OF 1971, FOR THE UNITED STATES AND BY REGION, SIZE AND SES OF COMMUNITY

	PERCENT OF SCHOOLS
UNITED STATES	44.5
BY REGION	
NORTH ATLANTIC	46.8
GREAT LAKES & PLAINS	38.7
WEST & SOUTHWEST	56.0
SOUTHEAST	37.7
BY SIZE OF COMMUNITY*	
LARGE CITY	70.4
MEDIUM CITY	40.4
SMALL CITY	48.1
OTHER	39.1
BY SES OF COMMUNITY*	
HIGH	47.9
LOW	48.9

*PUBLIC SCHOOLS ONLY.

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TABLE 14. NUMBER OF SCHOOLS IN WHICH PUPILS IN GRADES 1-6 VIEWED THE ELECTRIC COMPANY AT SCHOOL AS A PART OF THEIR REGULAR SCHOOL PROGRAM DURING THE FALL OF 1971, FOR THE UNITED STATES AND BY REGION, SIZE AND SES OF COMMUNITY

	SCHOOL GRADE*					
	1ST	2ND	3RD	4TH	5TH	6TH
UNITED STATES	6197	13112	11813	7298	4346	1972
BY REGION						
NORTH ATLANTIC	1982	4353	2596	1231	283	228
GREAT LAKES & PLAINS	1306	3921	3636	1752	983	431
WEST & SOUTHWEST	1899	3309	3809	3024	2157	556
SOUTHEAST	1010	1529	1771	1291	923	757
BY SIZE OF COMMUNITY**						
LARGE CITY	1793	3971	4934	2806	2411	729
MEDIUM CITY	812	1761	1290	569	371	477
SMALL CITY	1112	2819	2207	1445	517	143
OTHER	1686	2756	2466	2017	1006	581
BY SES OF COMMUNITY**						
HIGH	3428	7486	8012	4665	2903	1142
LOW	1975	3821	2886	2173	1401	788

*ESTIMATES FOR GRADES 1, 5, & 6 APPLY ONLY TO SUCH GRADES IN SCHOOLS CONTAINING GRADE 2, 3, OR 4.

**PUBLIC SCHOOLS ONLY.

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TABLE 15. PERCENT OF SCHOOLS IN WHICH PUPILS IN GRADES 1-6 VIEWED THE ELECTRIC COMPANY AT SCHOOL AS A PART OF THEIR REGULAR SCHOOL PROGRAM DURING THE FALL OF 1971, FOR THE UNITED STATES AND BY REGION, SIZE AND SES OF COMMUNITY

	SCHOOL GRADE*					
	1ST	2ND	3RD	4TH	5TH	6TH
UNITED STATES	8.9%	17.7%	16.8%	10.3%	6.2%	2.9%
BY REGION						
NORTH ATLANTIC	11.5%	25.1%	17.5%	8.3%	1.8%	1.4%
GREAT LAKES & PLAINS	6.0%	15.5%	15.5%	7.0%	4.3%	2.2%
WEST & SOUTHWEST	12.1%	19.3%	21.9%	17.9%	14.2%	4.3%
SOUTHEAST	6.8%	10.7%	11.7%	8.6%	5.0%	4.2%
BY SIZE OF COMMUNITY**						
LARGE CITY	16.1%	32.3%	43.1%	23.8%	22.2%	8.5%
MEDIUM CITY	12.1%	25.3%	18.4%	8.6%	4.2%	7.0%
SMALL CITY	7.2%	18.1%	14.8%	9.4%	3.1%	0.9%
OTHER	7.6%	12.3%	10.9%	9.0%	4.7%	2.5%
BY SES OF COMMUNITY**						
HIGH	8.8%	18.4%	20.6%	11.8%	7.1%	3.0%
LOW	12.4%	22.8%	17.6%	12.8%	10.0%	5.9%

*ESTIMATES FOR GRADES 1, 5, & 6 APPLY ONLY TO SUCH GRADES IN SCHOOLS CONTAINING GRADE 2, 3, OR 4.

**PUBLIC SCHOOLS ONLY.

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TABLE 16. PERCENT OF SCHOOLS WHICH CAN RECEIVE THE ELECTRIC COMPANY IN WHICH PUPILS IN GRADES 1-6 VIEWED THE ELECTRIC COMPANY AT SCHOOL AS A PART OF THEIR REGULAR SCHOOL PROGRAM DURING THE FALL OF 1971, FOR THE UNITED STATES AND BY REGION, SIZE AND SES OF COMMUNITY

	SCHOOL GRADE*					
	1ST	2ND	3RD	4TH	5TH	6TH
UNITED STATES	10.8%	20.8%	19.0%	11.9%	7.5%	3.8%
BY REGION						
NORTH ATLANTIC	12.0%	27.1%	18.5%	8.6%	1.9%	1.4%
GREAT LAKES & PLAINS	6.5%	17.3%	16.7%	7.4%	4.6%	2.4%
WEST & SOUTHWEST	14.6%	22.6%	23.4%	19.0%	14.7%	4.3%
SOUTHEAST	11.8%	16.0%	17.8%	14.3%	9.5%	8.5%
BY SIZE OF COMMUNITY**						
LARGE CITY	16.9%	33.0%	44.5%	24.2%	22.7%	8.5%
MEDIUM CITY	12.2%	25.6%	18.6%	9.0%	4.4%	7.3%
SMALL CITY	8.4%	21.2%	15.8%	9.9%	3.2%	0.9%
OTHER	11.2%	17.4%	15.4%	12.6%	7.7%	5.1%
BY SES OF COMMUNITY**						
HIGH	10.0%	20.5%	22.2%	12.8%	7.6%	3.2%
LOW	16.0%	28.3%	22.2%	16.5%	13.4%	9.2%

*ESTIMATES FOR GRADES 1, 5, & 6 APPLY ONLY TO SUCH GRADES IN SCHOOLS CONTAINING GRADE 2, 3, OR 4.

**PUBLIC SCHOOLS ONLY.

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TABLE 17. PERCENT OF SCHOOLS (IN AREAS WHERE THE ELECTRIC COMPANY WAS BEING SHOWN AND WHERE AT LEAST ONE TV SET WAS AVAILABLE) WHERE PUPILS IN GRADES 1-6 VIEWED THE PROGRAM AT SCHOOL AS A PART OF THEIR REGULAR SCHOOL PROGRAM DURING THE FALL OF 1971, FOR THE UNITED STATES AND BY REGION, SIZE AND SES OF COMMUNITY

	SCHOOL GRADE*					
	1ST	2ND	3RD	4TH	5TH	6TH
UNITED STATES	15.2	27.8	26.0	16.5	8.6	5.4
BY REGION						
NORTH ATLANTIC	16.8	32.3	24.7	15.6	1.7	1.6
GREAT LAKES & PLAINS	6.9	19.4	18.7	8.9	3.9	2.9
WEST & SOUTHWEST	21.3	33.5	33.5	27.7	19.3	7.3
SOUTHEAST	20.9	29.5	30.3	16.9	12.6	12.8
BY SIZE OF COMMUNITY**						
LARGE CITY	20.7	37.8	46.1	23.6	22.1	11.2
MEDIUM CITY	11.4	24.7	17.8	9.7	3.8	7.3
SMALL CITY	18.5	33.8	31.2	22.3	5.7	3.9
OTHER	14.4	25.0	20.4	15.2	9.0	5.6
BY SES OF COMMUNITY**						
HIGH	15.5	29.5	29.0	17.2	8.2	4.4
LOW	18.8	31.2	28.1	20.5	15.1	11.7

*ESTIMATES FOR GRADES 1, 5, & 6 APPLY ONLY TO SUCH GRADES IN SCHOOLS CONTAINING GRADE 2, 3, OR 4.

**PUBLIC SCHOOLS ONLY.

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TABLE 18. PERCENT OF SCHOOLS (IN AREAS WHERE THE ELECTRIC COMPANY WAS BEING SHOWN AND WHERE TV SETS WERE AVAILABLE IN SUFFICIENT QUANTITY AND QUALITY) WHERE PUPILS IN GRADES 1-6 VIEWED THE PROGRAM AT SCHOOL AS A PART OF THEIR REGULAR SCHOOL PROGRAM DURING THE FALL OF 1971, FOR THE UNITED STATES AND BY REGION, SIZE AND SES OF COMMUNITY

	SCHOOL GRADE*					
	1ST	2ND	3RD	4TH	5TH	6TH
UNITED STATES	18.9	34.0	30.4	21.3	9.8	6.0
BY REGION						
NORTH ATLANTIC	23.2	41.4	30.5	23.0	2.2	1.6
GREAT LAKES & PLAINS	8.9	26.7	24.5	16.4	5.8	2.9
WEST & SOUTHWEST	26.0	39.1	36.7	28.7	21.7	10.2
SOUTHEAST	21.9	30.3	31.8	18.4	12.6	12.9
BY SIZE OF COMMUNITY**						
LARGE CITY	26.6	44.6	52.8	26.0	24.7	11.2
MEDIUM CITY	12.4	29.5	20.8	11.8	4.1	8.4
SMALL CITY	21.6	40.3	36.9	27.0	6.8	4.0
OTHER	17.7	32.8	26.1	22.3	11.1	7.6
BY SES OF COMMUNITY**						
HIGH	19.6	38.1	36.0	22.9	9.7	5.6
LOW	20.9	34.5	30.7	23.4	17.6	12.2

*ESTIMATES FOR GRADES 1, 5, & 6 APPLY ONLY TO SUCH GRADES IN SCHOOLS CONTAINING GRADE 2, 3, OR 4.

**PUBLIC SCHOOLS ONLY.

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TABLE 19. PERCENT OF TARGET SCHOOLS WHERE SOME PUPILS VIEWED THE ELECTRIC COMPANY AT SCHOOL AS A PART OF THEIR REGULAR SCHOOL PROGRAM DURING THE FALL OF 1971, FOR THE UNITED STATES AND BY REGION, SIZE AND SES OF COMMUNITY

	PERCENT OF SCHOOLS
UNITED STATES	25.4
BY REGION	
NORTH ATLANTIC	33.2
GREAT LAKES & PLAINS	24.1
WEST & SOUTHWEST	27.4
SOUTHEAST	17.6
BY SIZE OF COMMUNITY*	
LARGE CITY	49.0
MEDIUM CITY	18.4
SMALL CITY	34.4
OTHER	19.1
BY SES OF COMMUNITY*	
HIGH	27.6
LOW	33.0

*PUBLIC SCHOOLS ONLY.

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TABLE 20. PERCENT OF TARGET SCHOOLS WHERE SOME PUPILS IN GRADES 1-6 VIEWED THE ELECTRIC COMPANY AT SCHOOL AS A PART OF THEIR REGULAR SCHOOL PROGRAM DURING THE FALL OF 1971, FOR THE UNITED STATES AND BY REGION, SIZE AND SES OF COMMUNITY

	SCHOOL GRADE*					
	1ST	2ND	3RD	4TH	5TH	6TH
UNITED STATES	8.5	18.7	19.3	13.5	5.9	3.8
BY REGION						
NORTH ATLANTIC	13.5	27.4	30.7	22.0	2.9	1.9
GREAT LAKES & PLAINS	5.9	16.3	17.2	6.4	6.1	3.0
WEST & SOUTHWEST	9.5	21.6	20.6	20.8	9.6	5.2
SOUTHEAST	6.2	10.8	11.6	7.3	4.6	5.2
BY SIZE OF COMMUNITY**						
LARGE CITY	17.8	36.0	38.2	21.3	15.8	14.4
MEDIUM CITY	1.3	16.2	21.8	11.3	5.0	3.7
SMALL CITY	12.9	25.8	25.0	20.7	4.1	***
OTHER	7.4	13.3	12.6	11.0	4.9	2.4
BY SES OF COMMUNITY**						
HIGH	8.7	21.4	23.8	16.1	7.4	4.4
LOW	12.8	21.7	18.8	15.0	6.7	5.0

*ESTIMATES FOR GRADES 1, 5, & 6 APPLY ONLY TO SUCH GRADES IN SCHOOLS CONTAINING GRADE 2, 3, OR 4.

**PUBLIC SCHOOLS ONLY.

***ESTIMATES FOR LESS THAN 0.1%.

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TABLE 21. NUMBER OF PUPILS IN GRADES 1-6 WHO VIEWED THE ELECTRIC COMPANY AT SCHOOL AS A PART OF THEIR REGULAR SCHOOL PROGRAM DURING THE FALL OF 1971, FOR THE UNITED STATES AND BY REGION, SIZE AND SES OF COMMUNITY
(IN THOUSANDS)

	SCHOOL GRADE*					
	1ST	2ND	3RD	4TH	5TH	6TH
UNITED STATES	304	682	595	287	158	82
BY REGION						
NORTH ATLANTIC	105	249	143	52	4	5
GREAT LAKES & PLAINS	51	171	130	38	14	11
WEST & SOUTHWEST	84	156	202	122	96	28
SOUTHEAST	64	106	120	75	43	37
BY SIZE OF COMMUNITY**						
LARGE CITY	113	231	268	134	104	37
MEDIUM CITY	29	74	62	23	15	15
SMALL CITY	57	169	115	60	11	8
OTHER	60	110	96	65	27	21
BY SES OF COMMUNITY**						
HIGH	153	394	393	179	85	44
LOW	106	190	148	103	72	38

*ESTIMATES FOR GRADES 1, 5, & 6 APPLY ONLY TO SUCH GRADES IN SCHOOLS CONTAINING GRADE 2, 3, OR 4.

**PUBLIC SCHOOLS ONLY.

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TABLE 22. PERCENT OF PUPILS IN GRADES 1-6 WHO VIEWED THE ELECTRIC COMPANY AT SCHOOL AS A PART OF THEIR REGULAR SCHOOL PROGRAM DURING THE FALL OF 1971, FOR THE UNITED STATES AND BY REGION, SIZE AND SES OF COMMUNITY

	SCHOOL GRADE*					
	1ST	2ND	3RD	4TH	5TH	6TH
UNITED STATES	7.5%	16.3%	14.4%	6.9%	3.8%	1.9%
BY REGION						
NORTH ATLANTIC	10.0%	23.1%	13.9%	5.4%	0.5%	0.6%
GREAT LAKES & PLAINS	4.1%	14.2%	12.0%	3.1%	1.2%	1.0%
WEST & SOUTHWEST	10.0%	17.4%	20.1%	12.5%	11.5%	4.0%
SOUTHEAST	6.5%	10.6%	12.0%	7.3%	2.6%	2.4%
BY SIZE OF COMMUNITY**						
LARGE CITY	11.8%	24.0%	27.3%	13.6%	12.1%	5.0%
MEDIUM CITY	5.9%	14.7%	9.6%	4.7%	0.9%	1.4%
SMALL CITY	5.8%	16.7%	11.9%	5.9%	1.1%	0.8%
OTHER	5.8%	10.6%	9.5%	6.2%	2.1%	1.6%
BY SES OF COMMUNITY**						
HIGH	6.4%	16.2%	15.9%	7.3%	2.8%	1.4%
LOW	10.1%	17.8%	14.3%	9.8%	8.7%	4.5%

*ESTIMATES FOR GRADES 1, 5, & 6 APPLY ONLY TO SUCH GRADES IN SCHOOLS CONTAINING GRADE 2, 3, OR 4.

**PUBLIC SCHOOLS ONLY.

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TABLE 23. PERCENT OF PUPILS IN SCHOOLS WHICH CAN RECEIVE THE ELECTRIC COMPANY WHO VIEWED THE ELECTRIC COMPANY AT SCHOOL AS A PART OF THEIR REGULAR SCHOOL PROGRAM DURING THE FALL OF 1971, FOR THE UNITED STATES AND BY REGION, SIZE AND SES OF COMMUNITY

	SCHOOL GRADE*					
	1ST	2ND	3RD	4TH	5TH	6TH
'ITED STATES	8.8%	18.8%	16.0%	8.2%	4.5%	2.4%
BY REGION						
NORTH ATLANTIC	10.8%	24.6%	14.0%	5.3%	0.5%	0.6%
GREAT LAKES & PLAINS	4.3%	16.0%	12.7%	3.2%	1.2%	1.1%
WEST & SOUTHWEST	11.3%	19.5%	21.7%	13.3%	11.5%	3.8%
SOUTHEAST	9.8%	14.9%	16.4%	12.5%	5.2%	4.8%
BY SIZE OF COMMUNITY**						
LARGE CITY	12.5%	24.9%	28.5%	14.2%	12.6%	5.1%
MEDIUM CITY	6.0%	14.9%	9.7%	4.9%	0.9%	1.5%
SMALL CITY	6.6%	18.7%	12.4%	6.0%	1.1%	0.8%
OTHER	8.9%	16.2%	14.5%	10.6%	4.4%	3.7%
BY SES OF COMMUNITY**						
HIGH	6.9%	17.6%	17.1%	7.9%	3.0%	1.5%
LOW	13.1%	22.9%	18.0%	13.8%	11.2%	6.6%

*ESTIMATES FOR GRADES 1, 5, & 6 APPLY ONLY TO SUCH GRADES IN SCHOOLS CONTAINING GRADE 2, 3, OR 4.

**PUBLIC SCHOOLS ONLY.

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TABLE 24. PERCENT OF PUPILS (IN SCHOOLS IN AREAS WHERE THE ELECTRIC COMPANY WAS BEING SHOWN AND WHERE AT LEAST ONE TV SET WAS AVAILABLE) WHO VIEWED THE PROGRAM AT SCHOOL AS A PART OF THEIR REGULAR SCHOOL PROGRAM DURING THE FALL OF 1971, FOR THE UNITED STATES AND BY REGION, SIZE AND SES OF COMMUNITY

	SCHOOL GRADE*					
	1ST	2ND	3RD	4TH	5TH	6TH
UNITED STATES	11.8	23.5	20.6	11.3	5.9	3.4
BY REGION						
NORTH ATLANTIC	13.1	28.0	17.2	8.3	0.5	0.5
GREAT LAKES & PLAINS	4.9	16.1	13.2	3.3	1.0	1.3
WEST & SOUTHWEST	12.5	25.7	27.3	18.9	14.5	5.6
SOUTHEAST	18.9	25.7	27.2	16.7	8.5	8.2
BY SIZE OF COMMUNITY**						
LARGE CITY	14.0	28.1	30.2	15.6	13.7	6.6
MEDIUM CITY	5.9	13.9	10.2	5.8	0.9	1.1
SMALL CITY	13.3	28.6	23.0	14.4	4.6	4.1
OTHER	11.8	20.7	18.3	11.5	5.2	3.2
BY SES OF COMMUNITY**						
HIGH	9.1	21.7	20.6	10.1	3.6	1.7
LOW	18.5	29.6	25.0	19.2	15.2	11.0

*ESTIMATES FOR GRADES 1, 5, & 6 APPLY ONLY TO SUCH GRADES IN SCHOOLS CONTAINING GRADE 2, 3, OR 4.

**PUBLIC SCHOOLS ONLY.

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TABLE 25. PERCENT OF PUPILS (IN SCHOOLS IN AREAS WHERE THE ELECTRIC COMPANY WAS BEING SHOWN AND WHERE TV SETS WERE AVAILABLE IN SUFFICIENT QUANTITY AND QUALITY) WHO VIEWED THE PROGRAM AT SCHOOL AS A PART OF THEIR REGULAR SCHOOL PROGRAM DURING THE FALL OF 1971, FOR THE UNITED STATES AND BY REGION, SIZE AND SES OF COMMUNITY

	SCHOOL GRADE*					
	1ST	2ND	3RD	4TH	5TH	6TH
UNITED STATES	14.2	27.9	23.9	13.9	6.1	3.9
BY REGION						
NORTH ATLANTIC	18.3	36.5	21.6	13.4	0.5	0.8
GREAT LAKES & PLAINS	6.4	21.3	17.3	5.3	1.7	1.3
WEST & SOUTHWEST	13.7	27.5	29.5	20.0	15.5	7.0
SOUTHEAST	19.4	25.8	28.7	18.0	8.5	8.2
BY SIZE OF COMMUNITY**						
LARGE CITY	15.7	30.3	32.8	16.5	15.0	7.2
MEDIUM CITY	6.2	16.7	11.9	9.3	1.0	1.9
SMALL CITY	16.4	34.2	27.6	17.7	4.7	4.0
OTHER	13.4	24.9	22.0	14.9	4.6	3.5
BY SES OF COMMUNITY**						
HIGH	11.0	25.8	24.3	12.7	3.4	1.9
LOW	20.4	32.7	27.3	22.4	17.2	12.8

*ESTIMATES FOR GRADES 1, 5, & 6 APPLY ONLY TO SUCH GRADES IN SCHOOLS CONTAINING GRADE 2, 3, OR 4.

**PUBLIC SCHOOLS ONLY.

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TABLE 26. NUMBER OF TARGET PUPILS IN GRADES 1-6 WHO VIEWED THE ELECTRIC COMPANY AT SCHOOL AS A PART OF THEIR REGULAR SCHOOL PROGRAM DURING THE FALL OF 1971, FOR THE UNITED STATES AND BY REGION, SIZE AND SES OF COMMUNITY (IN THOUSANDS)

	SCHOOL GRADE*					
	1ST	2ND	3RD	4TH	5TH	6TH
UNITED STATES	50.3	163.7	143.6	89.8	45.5	25.6
BY REGION						
NORTH ATLANTIC	6.9	50.4	38.4	14.6	1.5	0.8
GREAT LAKES & PLAINS	18.5	49.5	30.5	12.6	9.1	8.4
WEST & SOUTHWEST	13.5	32.6	46.5	40.4	25.1	8.5
SOUTHEAST	11.4	31.1	28.2	22.2	9.7	8.0
BY SIZE OF COMMUNITY**						
LARGE CITY	35.4	80.4	71.0	45.7	32.8	16.3
MEDIUM CITY	2.0	19.7	20.8	7.9	2.8	2.8
SMALL CITY	5.3	25.5	17.0	15.8	2.3	0.6
OTHER	7.3	26.8	23.5	16.7	7.5	5.9
BY SES OF COMMUNITY**						
HIGH	37.0	115.6	97.7	57.8	33.8	18.2
LOW	13.1	36.9	34.7	28.3	11.7	7.4

*ESTIMATES FOR GRADES 1, 5, & 6 APPLY ONLY TO SUCH GRADES IN SCHOOLS CONTAINING GRADE 2, 3, OR 4.

**PUBLIC SCHOOLS ONLY.

DRAFT

TABLE 27. PERCENT OF TARGET PUPILS IN GRADES 1-6 WHO VIEWED THE ELECTRIC COMPANY AT SCHOOL AS PART OF THEIR REGULAR SCHOOL PROGRAM DURING THE FALL OF 1971, FOR THE UNITED STATES AND BY REGION, SIZE AND SES OF COMMUNITY

	SCHOOL GRADE*					
	1ST	2ND	3RD	4TH	5TH	6TH
UNITED STATES	7.1%	19.2%	16.8%	11.0%	4.5%	2.8%
BY REGION						
NORTH ATLANTIC	5.9%	24.7%	20.4%	10.9%	0.7%	0.5%
GREAT LAKES & PLAINS	9.9%	17.9%	13.8%	4.8%	3.2%	3.3%
WEST & SOUTHWEST	8.0%	20.3%	22.8%	20.2%	12.0%	5.1%
SOUTHEAST	5.2%	14.3%	11.6%	9.4%	3.3%	2.5%
BY SIZE OF COMMUNITY**						
LARGE CITY	16.2%	29.2%	26.3%	17.7%	12.3%	8.2%
MEDIUM CITY	2.8%	17.1%	11.2%	7.8%	1.0%	1.1%
SMALL CITY	5.8%	20.3%	14.2%	12.5%	1.4%	0.4%
OTHER	3.1%	12.6%	10.6%	7.9%	2.0%	1.4%
BY SES OF COMMUNITY**						
HIGH	8.8%	24.7%	19.1%	13.2%	5.4%	3.1%
LOW	6.0%	13.1%	12.7%	10.6%	5.1%	3.7%

*ESTIMATES FOR GRADES 1, 5, & 6 APPLY ONLY TO SUCH GRADES IN SCHOOLS CONTAINING GRADE 2, 3, OR 4.

**PUBLIC SCHOOLS ONLY.

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TABLE 28. PERCENT OF TARGET PUPILS (IN SCHOOLS IN AREAS WHERE THE ELECTRIC COMPANY WAS BEING SHOWN) WHO VIEWED THE PROGRAM AT SCHOOL AS A PART OF THEIR REGULAR SCHOOL PROGRAM DURING THE FALL OF 1971, FOR THE UNITED STATES AND BY REGION, SIZE AND SES OF COMMUNITY

	SCHOOL GRADE*					
	1ST	2ND	3RD	4TH	5TH	6TH
UNITED STATES	7.8	21.8	18.5	13.0	5.3	3.3
BY REGION						
NORTH ATLANTIC	5.9	27.4	21.0	11.6	0.8	0.5
GREAT LAKES & PLAINS	10.1	19.7	14.6	5.2	3.5	3.6
WEST & SOUTHWEST	8.5	22.2	25.1	23.6	12.8	5.0
SOUTHEAST	6.7	17.8	14.2	12.7	5.0	3.9
BY SIZE OF COMMUNITY**						
LARGE CITY	17.3	30.5	27.9	19.2	13.3	8.6
MEDIUM CITY	2.7	16.7	12.0	8.2	1.0	1.0
SMALL CITY	6.4	21.5	13.6	13.7	1.5	0.4
OTHER	3.6	19.8	15.6	12.1	3.7	2.7
BY SES OF COMMUNITY**						
HIGH	9.9	28.2	20.9	14.3	5.9	3.3
LOW	6.4	15.2	14.8	14.2	6.5	4.6

*ESTIMATES FOR GRADES 1, 5, & 6 APPLY ONLY TO SUCH GRADES IN SCHOOLS CONTAINING GRADE 2, 3, OR 4.

**PUBLIC SCHOOLS ONLY.

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TABLE 29. PERCENT OF TARGET PUPILS (IN SCHOOLS IN AREAS WHERE THE ELECTRIC COMPANY WAS BEING SHOWN AND WHERE AT LEAST ONE TV SET WAS AVAILABLE) WHO VIEWED THE PROGRAM AT SCHOOL AS A PART OF THEIR REGULAR SCHOOL PROGRAM DURING THE FALL OF 1971, FOR THE UNITED STATES AND BY REGION, SIZE AND SES OF COMMUNITY

	SCHOOL GRADE*					
	1ST	2ND	3RD	4TH	5TH	6TH
UNITED STATES	8.9	24.3	21.8	14.9	6.6	4.3
BY REGION						
NORTH ATLANTIC	7.1	26.0	22.0	11.5	0.8	0.3
GREAT LAKES & PLAINS	9.1	19.6	15.1	6.7	3.0	4.7
WEST & SOUTHWEST	10.0	30.2	32.1	32.1	18.9	8.5
SOUTHEAST	9.4	22.9	20.4	12.7	5.9	5.0
BY SIZE OF COMMUNITY**						
LARGE CITY	18.1	34.0	29.0	20.0	14.6	11.3
MEDIUM CITY	2.8	14.5	15.8	10.3	0.9	0.5
SMALL CITY	6.3	20.6	15.8	14.8	2.6	0.9
OTHER	5.4	21.7	18.4	13.2	5.3	3.2
BY SES OF COMMUNITY**						
HIGH	9.7	28.5	21.7	15.2	6.6	3.9
LOW	8.2	17.1	19.2	15.5	8.0	6.4

*ESTIMATES FOR GRADES 1, 5, & 6 APPLY ONLY TO SUCH GRADES IN SCHOOLS CONTAINING GRADE 2, 3, OR 4.

**PUBLIC SCHOOLS ONLY.

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TABLE 30. PERCENT OF TARGET PUPILS (IN SCHOOLS IN AREAS WHERE THE ELECTRIC COMPANY WAS BEING SHOWN AND WHERE TV SETS WERE AVAILABLE IN SUFFICIENT QUANTITY AND QUALITY) WHO VIEWED THE PROGRAM AT SCHOOL AS A PART OF THEIR REGULAR SCHOOL PROGRAM DURING THE FALL OF 1971, FOR THE UNITED STATES AND BY REGION, SIZE AND SES OF COMMUNITY

	SCHOOL GRADE*					
	1ST	2ND	3RD	4TH	5TH	6TH
UNITED STATES	10.7	28.1	25.7	17.0	6.8	5.1
BY REGION						
NORTH ATLANTIC	10.2	30.6	26.4	15.0	1.0	0.5
GREAT LAKES & PLAINS	12.4	28.4	22.5	9.9	2.8	3.7
WEST & SOUTHWEST	10.9	31.4	34.7	33.2	21.4	15.0
SOUTHEAST	9.5	22.9	20.9	13.2	5.9	4.9
BY SIZE OF COMMUNITY**						
LARGE CITY	22.9	39.4	32.9	20.0	15.0	11.9
MEDIUM CITY	3.4	17.2	20.9	13.4	1.5	1.0
SMALL CITY	8.4	25.6	19.4	17.2	2.9	0.9
OTHER	5.8	24.3	20.1	16.2	4.8	4.1
BY SES OF COMMUNITY**						
HIGH	11.4	31.0	26.4	17.9	6.3	4.7
LOW	9.9	21.6	20.6	16.0	8.8	6.9

*ESTIMATES FOR GRADES 1, 5, & 6 APPLY ONLY TO SUCH GRADES IN SCHOOLS CONTAINING GRADE 2, 3, OR 4.

**PUBLIC SCHOOLS ONLY.

TABLE 31. PERCENT OF PUPILS IN GRADES 1-6 FROM FAMILIES WITH AN ANNUAL INCOME OF LESS THAN $3,000 WHO VIEWED THE ELECTRIC COMPANY AT SCHOOL AS A PART OF THEIR REGULAR SCHOOL PROGRAM DURING THE FALL OF 1971, FOR THE UNITED STATES AND BY REGION, SIZE AND SES OF COMMUNITY

	SCHOOL GRADE*					
	1ST	2ND	3RD	4TH	5TH	6TH
UNITED STATES	6.0%	13.6%	11.3%	6.2%	2.4%	1.8%
BY REGION						
NORTH ATLANTIC	5.9%	22.4%	23.4%	10.3%	0.8%	0.6%
GREAT LAKES & PLAINS	10.6%	12.8%	9.8%	3.8%	3.9%	3.8%
WEST & SOUTHWEST	6.2%	22.8%	13.0%	9.2%	4.7%	1.4%
SOUTHEAST	3.6%	7.4%	6.3%	3.6%	0.9%	1.5%
BY SIZE OF COMMUNITY**						
LARGE CITY	13.6%	26.0%	18.2%	7.2%	5.8%	4.9%
MEDIUM CITY	4.1%	13.3%	22.5%	17.1%	0.8%	0.3%
SMALL CITY	3.1%	10.9%	8.4%	5.2%	***	***
OTHER	3.0%	7.3%	5.9%	5.3%	1.5%	1.2%
BY SES OF COMMUNITY**						
HIGH	6.8%	16.9%	12.6%	8.6%	2.9%	2.4%
LOW	5.7%	10.0%	10.0%	4.2%	2.1%	1.5%

*ESTIMATES FOR GRADES 1, 5, & 6 APPLY ONLY TO SUCH GRADES IN SCHOOLS CONTAINING GRADE 2, 3, OR 4.

**PUBLIC SCHOOLS ONLY.

***ESTIMATE LESS THAN 0.1%.

TABLE 32. PERCENT OF PUPILS IN GRADES 1-6 FROM FAMILIES WHERE SPANISH IS SPOKEN WHO VIEWED THE ELECTRIC COMPANY AT SCHOOL AS A PART OF THEIR REGULAR SCHOOL PROGRAM DURING THE FALL OF 1971, FOR THE UNITED STATES AND BY REGION, SIZE AND SES OF COMMUNITY

	SCHOOL GRADE*					
	1ST	2ND	3RD	4TH	5TH	6TH
UNITED STATES	5.1%	11.2%	13.3%	6.8%	4.0%	0.7%
BY REGION						
NORTH ATLANTIC	0.8%	1.1%	1.1%	2.1%	***	0.0%
GREAT LAKES & PLAINS	8.4%	12.9%	9.8%	3.1%	1.4%	0.7%
WEST & SOUTHWEST	6.0%	16.9%	22.3%	9.7%	7.0%	1.1%
SOUTHEAST	0.0%	0.0%	0.4%	0.4%	0.4%	0.0%
BY SIZE OF COMMUNITY**						
LARGE CITY	6.8%	12.4%	16.8%	9.9%	6.5%	1.5%
MEDIUM CITY	3.2%	9.4%	5.5%	15.6%	2.8%	0.0%
SMALL CITY	4.7%	22.0%	14.3%	2.3%	***	***
OTHER	1.7%	3.7%	2.9%	4.3%	2.2%	0.0%
BY SES OF COMMUNITY**						
HIGH	10.2%	18.9%	23.9%	16.0%	7.0%	1.6%
LOW	1.2%	3.3%	3.1%	1.4%	2.0%	0.2%

*ESTIMATES FOR GRADES 1, 5, & 6 APPLY ONLY TO SUCH GRADES IN SCHOOLS CONTAINING GRADE 2, 3, OR 4.

**PUBLIC SCHOOLS ONLY.

***ESTIMATE LESS THAN 0.1%.

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TABLE 33. PERCENT OF PUPILS IN GRADES 1-6 WHO ARE ATTENDING SCHOOLS IN WHICH SOME PUPILS VIEWED THE ELECTRIC COMPANY AT SCHOOL AS A PART OF THEIR REGULAR SCHOOL PROGRAM DURING THE FALL OF 1971, FOR THE UNITED STATES AND BY REGION, SIZE AND SES OF COMMUNITY

	SCHOOL GRADE*					
	1ST	2ND	3RD	4TH	5TH	6TH
UNITED STATES	30.9%	31.8%	32.4%	30.9%	30.0%	29.4%
BY REGION						
NORTH ATLANTIC	38.5%	39.2%	37.4%	35.6%	33.8%	29.3%
GREAT LAKES & PLAINS	28.0%	28.5%	29.6%	29.1%	27.6%	32.2%
WEST & SOUTHWEST	39.4%	40.2%	41.6%	41.7%	43.4%	39.6%
SOUTHEAST	18.5%	20.3%	21.0%	17.2%	15.6%	15.7%
BY SIZE OF COMMUNITY**						
LARGE CITY	55.1%	55.1%	57.1%	54.6%	54.4%	55.7%
MEDIUM CITY	33.4%	35.5%	36.4%	36.3%	36.5%	40.9%
SMALL CITY	25.7%	26.4%	26.0%	26.1%	25.0%	22.5%
OTHER	19.6%	20.8%	20.8%	20.0%	18.4%	17.2%
BY SES OF COMMUNITY**						
HIGH	33.0%	33.5%	35.1%	33.9%	34.4%	34.8%
LOW	33.7%	36.0%	35.7%	34.8%	30.9%	27.4%

*ESTIMATES FOR GRADES 1, 5, & 6 APPLY ONLY TO SUCH GRADES IN SCHOOLS CONTAINING GRADE 2, 3, OR 4.

**PUBLIC SCHOOLS ONLY.

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TABLE 34. PERCENT OF TARGET PUPILS IN GRADES 1-6 WHO ARE IN SCHOOLS WHERE SOME PUPILS VIEWED THE ELECTRIC COMPANY AT SCHOOL AS A PART OF THEIR REGULAR SCHOOL PROGRAM DURING THE FALL OF 1971, FOR THE UNITED STATES AND BY REGION, SIZE AND SES OF COMMUNITY

	SCHOOL GRADE*					
	1ST	2ND	3RD	4TH	5TH	6TH
UNITED STATES	29.4%	33.8%	35.3%	32.5%	29.5%	29.6%
BY REGION						
NORTH ATLANTIC	31.8%	39.4%	39.9%	37.7%	29.0%	27.0%
GREAT LAKES & PLAINS	33.1%	34.7%	36.2%	35.6%	32.4%	42.1%
WEST & SOUTHWEST	34.9%	40.1%	43.6%	41.5%	42.4%	32.2%
SOUTHEAST	20.6%	23.5%	24.0%	19.4%	17.5%	17.1%
BY SIZE OF COMMUNITY**						
LARGE CITY	53.8%	57.9%	61.1%	60.0%	54.2%	59.9%
MEDIUM CITY	22.1%	29.5%	28.0%	25.3%	25.1%	28.7%
SMALL CITY	28.3%	31.3%	32.6%	29.6%	27.3%	24.5%
OTHER	16.8%	20.8%	21.0%	20.6%	18.8%	14.9%
BY SES OF COMMUNITY**						
HIGH	35.1%	37.4%	39.9%	38.0%	37.2%	37.0%
LOW	26.7%	35.7%	35.8%	34.1%	26.2%	24.7%

*ESTIMATES FOR GRADES 1, 5, & 6 APPLY ONLY TO SUCH GRADES IN SCHOOLS CONTAINING GRADE 2, 3, OR 4.

**PUBLIC SCHOOLS ONLY.

TABLE 35. PERCENT OF ELEMENTARY SCHOOL PRINCIPALS WHO IDENTIFIED VARIOUS ACTIVITIES WHICH HAVE BEEN UNDERTAKEN BY THEIR SCHOOLS IN ORDER TO FACILITATE THE VIEWING OF THE ELECTRIC COMPANY AT SCHOOL IN THE FALL OF 1971, FOR THE UNITED STATES AND BY REGION, SIZE AND SES OF COMMUNITY

	RESPONSE TO QUESTION 7 OR 11*											
	7Y	11A	11B	11C	11D	11E	11F	11G	11H	11I	11J	11K
UNITED STATES	22.8	1.0	3.9	1.2	0.6	1.3	4.7	1.4	12.1	4.9	1.9	5.6
BY REGION												
NORTH ATLANTIC	27.9	1.1	2.2	0.6	0.1	2.4	5.7	0.9	12.7	4.2	1.5	11.4
GREAT LAKES & PLAINS	21.1	0.2	1.5	1.7	1.4	0.7	6.9	1.4	14.3	7.5	2.2	1.4
WEST & SOUTHWEST	27.8	2.6	6.5	1.5	0.6	1.2	2.4	2.2	13.4	4.1	2.5	8.7
SOUTHEAST	13.6	0.3	6.0	0.6	***	0.8	3.3	0.9	6.8	2.7	1.3	1.6
BY SIZE OF COMMUNITY**												
LARGE CITY	49.9	3.3	8.6	4.4	2.5	3.0	9.1	3.3	27.1	11.6	5.4	11.6
MEDIUM CITY	28.9	1.5	1.7	0.3	0.1	2.3	7.3	0.2	15.0	5.6	1.9	9.0
SMALL CITY	19.8	0.5	2.7	0.7	0.8	1.1	5.2	0.6	11.6	3.9	1.6	4.3
OTHER	13.8	0.6	4.7	0.7	0.1	0.8	1.9	1.7	7.7	4.1	1.3	2.2
BY SES OF COMMUNITY**												
HIGH	24.4	1.6	3.1	1.3	1.0	1.5	5.0	1.5	14.3	6.6	2.4	5.7
LOW	25.9	0.4	8.4	1.8	0.2	1.6	4.8	1.7	12.3	3.9	2.1	5.2

*SEE ITEMS 7 AND 11 OF THE QUESTIONNAIRE FOR THE EXACT WORDING OF EACH RESPONSE ALTERNATIVE.

**PUBLIC SCHOOLS ONLY.

***ESTIMATE LESS THAN 0.1%.

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TABLE 36. NUMBER OF DAYS PER WEEK DURING WHICH THE AVERAGE VIEWING PUPIL IN GRADES 1-6 VIEWED THE ELECTRIC COMPANY AT SCHOOL AS A PART OF HIS REGULAR SCHOOL PROGRAM DURING THE FALL OF 1971, FOR THE UNITED STATES AND BY REGION, SIZE AND SES OF COMMUNITY

	SCHOOL GRADE*					
	1ST	2ND	3RD	4TH	5TH	6TH
UNITED STATES	3.85	4.22	3.82	3.82	3.32	3.19
BY REGION						
NORTH ATLANTIC	4.25	3.99	4.00	3.46	3.48	3.16
GREAT LAKES & PLAINS	3.43	4.61	4.01	4.61	4.75	3.88
WEST & SOUTHWEST	4.17	4.43	3.74	3.87	2.94	4.04
SOUTHEAST	3.06	3.27	3.41	2.98	2.69	2.14
BY SIZE OF COMMUNITY**						
LARGE CITY	3.11	4.12	3.60	3.48	3.10	3.35
MEDIUM CITY	4.22	4.14	4.50	4.32	3.94	4.03
SMALL CITY	4.81	4.58	3.88	4.30	4.55	4.00
OTHER	3.77	4.15	4.01	3.72	3.18	2.26
BY SES OF COMMUNITY**						
HIGH	3.75	4.35	3.96	3.89	3.61	3.60
LOW	4.04	4.05	3.58	3.57	2.68	2.74

*ESTIMATES FOR GRADES 1, 5, & 6 APPLY ONLY TO SUCH GRADES IN SCHOOLS CONTAINING GRADE 2, 3, OR 4.

**PUBLIC SCHOOLS ONLY.

TABLE 37. PERCENT OF SCHOOLS IN WHICH THE TYPICAL PUPIL IN GRADES 1-6 VIEWED THE ELECTRIC COMPANY AT SCHOOL VARIOUS NUMBER OF DAYS PER WEEK AS A PART OF HIS REGULAR SCHOOL PROGRAM DURING THE FALL OF 1971, FOR THE UNITED STATES

NUMBER OF DAYS PER WEEK	SCHOOL GRADE*					
	1ST	2ND	3RD	4TH	5TH	6TH
ONE	10.7	4.7	7.0	7.3	15.6	22.6
TWO	12.6	7.7	19.5	20.8	28.4	26.2
THREE	15.2	14.3	13.1	10.1	4.2	5.9
FOUR	5.9	6.4	5.9	6.9	1.1	1.6
FIVE	55.6	66.9	54.4	54.8	50.6	43.7

*ESTIMATES FOR GRADES 1, 5 & 6 APPLY ONLY TO SUCH GRADES IN SCHOOLS CONTAINING GRADE 2, 3 OR 4.

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TABLE 38. PERCENT OF SCHOOLS IN WHICH PUPILS IN GRADES 1-6 VIEWED THE ELECTRIC COMPANY AT SCHOOL IN THEIR REGULAR CLASSROOMS AS A PART OF THEIR REGULAR SCHOOL PROGRAM DURING THE FALL OF 1971, FOR THE UNITED STATES AND BY REGION, SIZE AND SES OF COMMUNITY

	SCHOOL GRADE*					
	1ST	2ND	3RD	4TH	5TH	6TH
UNITED STATES	5.8%	10.5%	9.7%	6.0%	3.9%	1.8%
BY REGION						
NORTH ATLANTIC	9.0%	15.4%	10.1%	5.0%	1.2%	1.2%
GREAT LAKES & PLAINS	4.5%	11.3%	9.1%	2.2%	1.7%	1.1%
WEST & SOUTHWEST	5.0%	7.8%	11.3%	10.7%	8.7%	2.2%
SOUTHEAST	5.1%	7.2%	8.1%	7.1%	4.3%	3.3%
BY SIZE OF COMMUNITY**						
LARGE CITY	10.9%	23.8%	29.5%	16.5%	15.1%	3.6%
MEDIUM CITY	6.6%	6.5%	6.9%	4.4%	1.0%	2.6%
SMALL CITY	4.1%	9.0%	5.9%	4.9%	1.5%	1.1%
OTHER	4.2%	6.3%	4.7%	3.9%	2.3%	1.9%
BY SES OF COMMUNITY**						
HIGH	6.0%	10.2%	11.5%	6.8%	4.2%	1.4%
LOW	5.6%	12.1%	8.1%	7.2%	5.5%	3.9%

*ESTIMATES FOR GRADES 1, 5, & 6 APPLY ONLY TO SUCH GRADES IN SCHOOLS CONTAINING GRADE 2, 3, OR 4.

**PUBLIC SCHOOLS ONLY.

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TABLE 39. PERCENT OF SCHOOLS IN WHICH PUPILS IN GRADES 1-6 VIEWED THE ELECTRIC COMPANY AT SCHOOL BY DOUBLING-UP IN CLASSROOMS WITH A TV SET AS A PART OF THEIR REGULAR SCHOOL PROGRAM DURING THE FALL OF 1971, FOR THE UNITED STATES AND BY REGION, SIZE AND SES OF COMMUNITY

	SCHOOL GRADE*					
	1ST	2ND	3RD	4TH	5TH	6TH
UNITED STATES	1.3%	4.1%	3.0%	1.5%	1.0%	1.0%
BY REGION						
NORTH ATLANTIC	0.8%	6.9%	2.7%	0.8%	***	0.0%
GREAT LAKES & PLAINS	0.9%	3.5%	3.5%	2.9%	1.8%	2.2%
WEST & SOUTHWEST	3.2%	4.7%	4.3%	1.3%	0.9%	0.4%
SOUTHEAST	0.2%	1.2%	1.2%	0.3%	1.2%	0.9%
BY SIZE OF COMMUNITY**						
LARGE CITY	3.0%	8.2%	7.6%	2.9%	2.5%	3.7%
MEDIUM CITY	0.2%	6.7%	4.2%	0.2%	1.3%	1.1%
SMALL CITY	2.4%	4.3%	2.7%	2.2%	1.5%	0.6%
OTHER	0.5%	1.6%	1.7%	1.2%	0.4%	0.2%
BY SES OF COMMUNITY**						
HIGH	1.1%	4.1%	3.3%	2.1%	1.5%	1.4%
LOW	2.5%	4.9%	4.0%	0.8%	0.7%	0.7%

*ESTIMATES FOR GRADES 1, 5, & 6 APPLY ONLY TO SUCH GRADES IN SCHOOLS CONTAINING GRADE 2, 3, OR 4.

**PUBLIC SCHOOLS ONLY.

***ESTIMATE LESS THAN 0.1%.

TABLE 40. PERCENT OF SCHOOLS IN WHICH PUPILS IN GRADES 1-6 VIEWED THE ELECTRIC COMPANY AT SCHOOL IN AN AUDITORIUM OR OTHER LARGE ROOM AS A PART OF THEIR REGULAR SCHOOL PROGRAM DURING THE FALL OF 1971, FOR THE UNITED STATES AND BY REGION, SIZE AND SES OF COMMUNITY

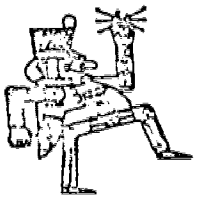
	SCHOOL GRADE*					
	1ST	2ND	3RD	4TH	5TH	6TH
UNITED STATES	1.0%	2.7%	2.2%	1.7%	0.6%	0.3%
BY REGION						
NORTH ATLANTIC	1.0%	3.7%	2.3%	1.1%	0.6%	0.3%
GREAT LAKES & PLAINS	0.5%	1.0%	1.9%	2.5%	0.8%	0.4%
WEST & SOUTHWEST	2.0%	5.7%	3.4%	2.7%	1.0%	0.4%
SOUTHEAST	0.7%	0.5%	1.2%	0.1%	***	0.0%
BY SIZE OF COMMUNITY**						
LARGE CITY	1.9%	3.5%	3.6%	2.7%	0.5%	0.4%
MEDIUM CITY	1.4%	6.9%	2.4%	2.3%	2.1%	2.1%
SMALL CITY	0.5%	2.9%	2.5%	0.7%	0.0%	0.0%
OTHER	1.5%	2.1%	2.5%	2.2%	1.0%	0.0%
BY SES OF COMMUNITY**						
HIGH	0.6%	1.8%	2.1%	1.4%	0.4%	0.2%
LOW	3.0%	6.6%	4.3%	3.1%	1.5%	0.7%

*ESTIMATES FOR GRADES 1, 5, & 6 APPLY ONLY TO SUCH GRADES IN SCHOOLS CONTAINING GRADE 2, 3, OR 4.

**PUBLIC SCHOOLS ONLY.

***ESTIMATE LESS THAN 0.1%.

APPENDIX C. DRAFT THE SPRING 1972 TEACHER QUESTIONNAIRE
ALL TEACHER FINDINGS



CHILDREN'S TELEVISION WORKSHOP 1 LINCOLN PLAZA, NEW YORK, N.Y. 10023 (212) 595-3456

Dear Teacher:

Last Fall we surveyed a national sample of elementary schools to learn the extent to which our new television series, "The Electric Company," is being viewed by American children at school. Your school was one of those selected and in replying to our questionnaire your principal indicated that some of your pupils have viewed "The Electric Company."

We would now like to learn more about you, your pupils, the conditions under which they are viewing "The Electric Company," and your evaluation of the program to date. The questions which follow may at first glance seem long, but they have been organized to facilitate an easy response: in some cases we have asked you simply to check one of several alternatives; in others we have asked you to express briefly your answer in your own words.

Since this questionnaire is being sent to only a small sample of those teachers in the United States whose pupils have viewed "The Electric Company" (approximately one teacher at each relevant grade level in 250 schools) it is most important that we hear from each and every one of you. A pre-addressed stamped envelope is provided to return this questionnaire to the Research Triangle Institute, which is conducting this survey for us.

Please take a few minutes from your busy schedule to help us improve our television series. Your candid answers to these questions will be of great value in our efforts to revise our program for the 1972-73 school year. Thank you for your assistance.

Sincerely yours,

Joan Ganz Cooney
President

PLEASE ANSWER QUESTION 1 BEFORE CONTINUING

1. Since the beginning of the current school year have any pupils for whom you have a direct instructional responsibility viewed "The Electric Company" at school as a part of their regular school program?

11% a. No, my pupils have never viewed "The Electric Company" at school
18% b. Yes, but my pupils are no longer viewing it
71% c. Yes, and they are still viewing it

THIS QUESTIONNAIRE IS INTENDED SOLELY FOR TEACHERS WHOSE PUPILS ARE CURRENTLY VIEWING "THE ELECTRIC COMPANY" AT SCHOOL. IF YOUR ANSWER TO QUESTION 1 WAS EITHER "a" OR "b" PLEASE RETURN THIS QUESTIONNAIRE UNANSWERED. IF YOUR ANSWER TO QUESTION 1 WAS "c" PLEASE TURN TO QUESTION 2 WHICH IS LOCATED AT THE TOP OF PAGE 2 AND CONTINUE.

2. Please circle each of the following grade levels for which you have a direct instructional responsibility on a regular basis during the current school year. Then write in the number of pupils whom you are currently teaching at each grade level which you have circled.

Grade Levels Which You Teach (please circle)	Number of Pupils Whom You Teach (please write in)
1st	—
2nd	—
3rd	—
4th	—
5th	—
6th	—
All teachers	1,565,000

NOTE: THROUGHOUT THE REMAINDER OF THIS QUESTIONNAIRE YOU WILL BE ASKED A SERIES OF QUESTIONS ABOUT "YOUR PUPILS." UNLESS OTHERWISE INDICATED THE TERM "YOUR PUPILS" REFERS ONLY TO THOSE PUPILS WHOM YOU COUNTED IN ANSWERING QUESTION 2 WHO ARE VIEWING "THE ELECTRIC COMPANY" AT SCHOOL ON A REGULAR BASIS.

	Grade						
	1st	2nd	3rd	4th	5th	6th	All teachers
3. a. How many of YOUR PUPILS at each relevant grade level are currently viewing "The Electric Company" AT SCHOOL? →	—	—	—	—	—	—	91%
b. Approximately how many OF YOUR VIEWING PUPILS . . .							
1) are below grade level in reading skills? →	—	—	—	—	—	—	39%
2) are from families with an annual income of less than $3,000? →	—	—	—	—	—	—	12%
3) come from homes where Spanish is spoken? →	—	—	—	—	—	—	7%
c. How many days per week (d/w) do your pupils in each relevant grade generally view "The Electric Company" AT SCHOOL? →	— d/w	— d/w	— d/w	— d/w	— d/w	— d/w	1=10% 2=12% 3=14% 4=13% 5=51%

4. On what date did any of your pupils first begin to view "The Electric Company" at school on a REGULAR basis? (Note: the first broadcast of the program was on 10/25/71).

— / — / —
(month) (day) (year)

5. Do your pupils generally view "The Electric Company" in a room with pupils from other classes?

66% No
34% Yes

6. What is the TOTAL number of pupils in this room (including your pupils) at the time "The Electric Company" is being viewed by your pupils?

33.6 pupils

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7. Do your pupils view "The Electric Company" in color or black and white?

5% all pupils view it in color
95% all pupils view it in black and white
0% some pupils view it in color, some in black and white

8. On what channel does the signal for "The Electric Company" which your pupils receive originate?

72% channels 1-13 (i.e., VHF)
24% channels 14-60 (i.e., UHF)
4% I do not know

9. In what way is the TV picture for "The Electric Company" which your pupils see received at your school?

42% via an antenna on the TV set (e.g., "rabbit ears")
28% via an antenna on the school to which our set is connected
23% via a cable carrying both commercial and educational channels
7% via a cable carrying only educational channels
0% via a cable carrying only commercial channels

10. In general have your pupils experienced reception difficulties in viewing "The Electric Company?"

68% no
18% yes, the quality of the transmission is occasionally poor
4% yes, the quality of the transmission is often poor
9% yes, our television set(s) often do(es) not work well
1% yes, other (please specify: _____)

11. How many TV sets are in use in the room when your pupils are viewing "The Electric Company?"

1.01 set(s)

12. What is the approximate size in inches of the screen on this TV set? (If more than one set please give the average size)

21.3 inches

13. On how many channels can "The Electric Company" be received during your school day?

1.09 channel(s)

14. At how many times can "The Electric Company" be received during your school day?

1.27 time(s)

15. At approximately what time of the day do your pupils view "The Electric Company?"

- before 8 AM
1% between 8 & 9 AM
4% between 9 & 10 AM
22% between 10 & 11 AM
21% between 11 & 12 AM
12% between 12 & 1 PM
33% between 1 & 2 PM
6% between 2 & 3 PM
- between 3 & 4 PM
- after 4 PM

16. From your point of view what would be the most ideal time for your pupils to view "The Electric Company?" (Please check only one)

- before 8 AM
2% between 8 & 9 AM
9% between 9 & 10 AM
18% between 10 & 11 AM
16% between 11 & 12 AM
12% between 12 & 1 PM
30% between 2 & 3 PM
11% between 3 & 4 PM
2% after 4 PM
1%

17. Which of the following best describes the pattern of viewing "The Electric Company" by your pupils?

2% pupils view it at school and are assigned to view it at home as well
53% pupils view it at school and are encouraged to view it at home as well
0% pupils view it at school but are encouraged not to view it at home as well
41% pupils view it at school and are neither encouraged nor discouraged regarding home viewing
3% pupils view it at school but it is not available for home viewing

18. Which of the following best describes the basis upon which your pupils are assigned to watch "The Electric Company?"

74% all pupils whose instruction I am responsible for view "The Electric Company" as a part of their regular reading instruction
18% those pupils who are having difficulty with reading view "The Electric Company" as a supplement to their regular reading instruction
3% those pupils who are doing well in reading view "The Electric Company" as a form of enrichment
6% other (please specify: _____)

19. To the best of your knowledge which of the following individuals participated in the decision which led to pupils in this school viewing "The Electric Company" at school? (Check as many as apply)

3% a. school board members
6% b. superintendent of schools
15% c. central office curriculum coordinator
8% d. school curriculum coordinator
5% e. central office reading specialist
13% f. school reading specialist
47% g. principal of this school
1% h. principal of other schools
74% i. I did
36% j. other teachers in this school
4% k. teachers in other schools
1% l. parents
6% m. others (_____)

20. Who do you feel is most responsible for the decision that your pupils should view "The Electric Company" at school? (Please check only one)

0% school board
1% superintendent of schools
1% central office curriculum coordinator
1% school curriculum coordinator
0% central office reading specialist
1% school reading specialist
10% principal
77% I am
0% another teacher in this school
8% a group of teachers in this school
0% a group of teachers in this school system
1% other (_____)

21. Who made the final decision with respect to whether or not your pupils would view "The Electric Company?" (Please check only one)

0% school board
0% superintendent of schools
1% central office curriculum coordinator
1% school curriculum coordinator
- central office reading specialist
1% school reading specialist
9% principal
79% I did
- another teacher in this school
7% a group of teachers in this school
0% a group of teachers in this school system
0% other (_____)

22. Which of the following statements best characterizes the previous experience of your school with instruction via television (ITV) at your grade level?

18% "The Electric Company" is the first regular use which this school has made recently of ITV at this grade level
22% we have previously used ITV at this grade level but currently are not using any program beside "The Electric Company"
56% we have previously used ITV at this grade level and the children are currently viewing programs in addition to "The Electric Company"
5% other (_____)

23. Which of the following describe how time was created in order for your pupils to view "The Electric Company" at school? (Check as many as apply)

- a. the school day was lengthened
45% b. time which previously was devoted to other forms of reading instruction was made available so that pupils could view "The Electric Company"
42% c. time which previously was devoted to another subject was made available so that the pupils could view "The Electric Company"
14% d. time which previously was devoted to lunch or recess was made available so that the pupils could view "The Electric Company"
6% e. other (_____)

24. Which of the following best describes how the children are seated while they are watching "The Electric Company?"

25% they must sit at their desks in their regular location
0% they must sit in auditorium chairs
5% they must sit in chairs in front of the television set
7% they must sit on the floor in front of the television set
57% they can arrange themselves in whatever way they feel most comfortable
6% other (_____)

25. What are the lighting conditions in the room while "The Electric Company" is being viewed?

29% normal lighting
47% slightly darker than normal
23% considerably darker than normal
2% completely dark

26. In general who is supervising the pupils while they are watching "The Electric Company?" (If more than one person please check only the person most responsible for supervising the pupils)

92% their regular teacher
2% a reading specialist
- an audiovisual specialist
4% a teacher aide
1% a student teacher
1% someone from the school office
0% a parent volunteer
1% other (_____)

27. How frequently does each of the following occur while the children are viewing "The Electric Company?" (Please use the following codes: 1=never, 2=very rarely, 3=occasionally, 4=frequently, 5=almost always, 6=always).

4.0 a. the children repeat aloud words being presented by the program

2.5 b. the children write words being presented by the program

5.1 c. the children sing along with the music from the program

1.6 d. the children get up and dance to the music from the program

2.1 e. the children become bored with the program

2.0 f. the children become so noisy that they must be asked to be more quiet

1.4 g. a child has to be sent out of the room for misbehaving during the program

1.2 h. the TV set has to be turned off because the children are not paying sufficient attention to the program

28. While some pupils are watching "The Electric Company" are there other pupils in the room with them who are not assigned to watch the program?

83% no (please skip to Question 30)
17% yes (please continue)

29. What are these other pupils doing?

47% a. reading individually
35% b. writing individually
14% c. working in groups
55% d. other (_____)

30. To what degree has the reading interest of your typical pupils changed as a result of their having viewed "The Electric Company?"

- it has declined
12% it has remained unchanged
64% it has improved slightly
24% it has improved greatly

31. To what degree has the ability of your typical pupils to decode words changed as a result of their having viewed "The Electric Company?"

- it has declined
5% it has remained unchanged
67% it has improved slightly
38% it has improved greatly

32. To what degree has the ability of your typical pupils to spell words changed as a result of their having viewed "The Electric Company?"

- it has declined
18% it has remained unchanged
61% it has improved slightly
21% it has improved greatly

33. To what degree has the basic sight vocabulary of your typical pupils changed as a result of their having viewed "The Electric Company?"

- it has declined
4% it has remained unchanged
63% it has improved slightly
33% it has improved greatly

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34. Assuming that all the technical and administrative problems currently associated with viewing instructional television can be solved, how useful do you feel television can be for the teaching of reading?

- \- of no use
- 1% of very little use
- 15% of some use
- 38% of moderate use
- 46% of great use

35. During the 1970-71 school year did you use television as a part of the regular instructional program for your pupils?

- 20% no, not at all
- 18% yes, on rare occasions
- 36% yes, at least once a week
- 17% yes, at least once a day
- 9% I did not teach in 1970-71

36. If each program of "The Electric Company" could be aired more than once a day would you prefer . . .

- 12% that a given program be shown first in the evening and then again the following day?
- 88% that a given program be shown first during the day and then again that evening?

37. How many years of teaching experience do you have?

12.3 years

38. How many years of teaching experience in this school do you have?

5.9 years

39. What is the highest level of education which you have achieved?

- 3% less than a bachelor's degree
- 77% bachelor's degree
- 16% master's degree
- 4% master's degree plus 30 hours
- 0% doctorate

40. Which grade are you now teaching? (Please check only one answer).

- 12% first grade only
- 40% second grade only
- 19% third grade only
- 10% fourth grade only
- 3% fifth grade only
- 1% sixth grade only
- 9% a combination of grades
- 1% selected pupils from various grades
- 4% other (_____)

41. Which of the following best describes your current teaching responsibilities?

- 72% I teach all of the academic subjects to one class of pupils
- 12% I teach all of the academic subjects to more than one class of pupils
- 3% I teach some of the academic subjects to one class of pupils
- 7% I teach some of the academic subjects to more than one class of pupils
- 2% I am a specialist in reading
- 5% other (_____)

42. In which of the following ways did you hear about "The Electric Company" prior to the first broadcast of the program? (Please check as many as apply).

- 9% a. by watching a TV talk show
- 29% b. by watching the 1/2 hour TV preview
- 2% c. from a radio announcement
- 24% d. from a TV announcement
- 30% e. from a newspaper article
- 23% f. from a professional journal
- 5% g. from a popular magazine article
- 55% h. from a booklet called The Electric Company
- 32% i. from my principal
- 31% j. from another teacher
- 5% k. from the children in my school
- 2% l. from the parents of the children in my school

43. What is your present overall opinion regarding "The Electric Company?"

- 85% very favorable
- 14% slightly favorable
- 0% neutral
- \- slightly negative
- 1% very negative

44. How does your present opinion regarding "The Electric Company" compare with your opinion when you first saw the program?

- 7% less favorable now than then
- 49% about the same now as then
- 26% somewhat more favorable now than then
- 17% much more favorable now than then

45. Currently how interested are your pupils in viewing "The Electric Company?"

- 80% very interested
- 17% slightly interested
- 1% neutral
- 1% slightly disinterested
- 1% very disinterested

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46. In general how interested in viewing "The Electric Company" are your pupils now in comparison to when they first saw the program?

15% less interested now than when they first saw it
43% about the same now as when they first saw it
29% somewhat more interested now than when they first saw it
14% much more interested now than when they first saw it

47. To what degree is some discussion with the children immediately before they see a program of "The Electric Company" useful in helping them to learn what is being taught by the program?

7% prior discussion is absolutely essential
74% prior discussion is helpful, but not essential
17% prior discussion is neither helpful nor detrimental
1% prior discussion is detrimental

48. To what degree is some discussion with the children while they are viewing a program of "The Electric Company" useful in helping them to learn what is being taught by the program?

8% concurrent discussion is absolutely essential
54% concurrent discussion is helpful, but not essential
14% concurrent discussion is neither helpful nor detrimental
24% concurrent discussion is detrimental

49. To what degree is some discussion with the children immediately after they have viewed a program of "The Electric Company" useful in helping them to learn what is being taught by the program?

29% subsequent discussion is absolutely essential
65% subsequent discussion is helpful, but not essential
5% subsequent discussion is neither helpful nor detrimental
1% subsequent discussion is detrimental

50. At what time does the school day begin for your pupils? _____ AM

51. At what time are your pupils dismissed for the day? _____ PM

52. During a typical school day how many minutes (ms.) does the typical pupil in your class currently spend in each of the following types of activity?

a. eating lunch	30 ms.
b. playing at gym or recess	37 ms.
c. watching nationally produced instructional television	29 ms.
d. watching locally produced instructional television	9 ms.
e. listening to a tape or record	14 ms.
f. watching a film or filmstrip	14 ms.
g. working at a computer terminal	0 ms.
h. working with a programmed textbook	13 ms.
i. reading a conventional book or textbook	42 ms.
j. writing on printed workbooks or worksheets prepared by a publisher	26 ms.
k. writing on workbooks or worksheets prepared by this school system	9 ms.
l. writing on workbooks or worksheets prepared by you or another teacher in this school	23 ms.

53. Do you get to see a copy of the bi-weekly Guide to Shows for "The Electric Company" before the showing of the programs?

53% no, I have never seen this guide (Please skip to Question 56)
9% yes, I see it very rarely
25% yes, I usually see it
13% yes, I see it before every [illegible]ow

54. How do you receive the Guide to Shows?

24% a copy is mailed to me directly
22% a copy is mailed to one of the other teachers in this school who shares it with me
46% a copy is mailed to our school and circulated among the relevant teachers
9% a copy is mailed to our school system and circulated among the relevant teachers

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55. In what ways, if any, could the Guide to Shows be changed in order to make it more useful to teachers at your grade level?

40% respondent

56. Are there any technical or administrative problems which currently make it difficult for you to make the best use of "The Electric Company?"

22% responded

57. What types of instructional materials or teaching aids, if any, would help you to make more effective use of "The Electric Company?"

59% responded

58. What is your general opinion regarding the usefulness of "The Electric Company" as a form of reading instruction?

67% responded

59. What do you feel are the most useful reading skills which your pupils have learned from viewing "The Electric Company"

77% responded

60. Are there any additional comments you would like to make regarding your experiences to date in viewing "The Electric Company?"

57% responded

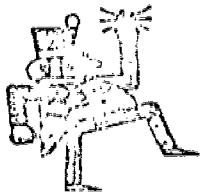
Please Note: The Guide to Shows for "The Electric Company" often features instructional materials suggested by teachers for use in conjunction with the viewing of the program. If you have developed instructional materials or techniques which you would like to share with other teachers we would appreciate hearing from you. You may send such materials to us under separate cover as follows:

Mr. Jack Roberts
"The Electric Company"
Children's Television Workshop
One Lincoln Plaza
New York, New York 10023

DRAFT

APPENDIX C. THE SPRING 1972 TELEVISION QUESTIONNAIRE

2ND GRADE TECHNICAL FINDINGS



CHILDREN'S TELEVISION WORKSHOP 1 LINCOLN PLAZA, NEW YORK, N.Y. 10023 (212) 595-3456

Dear Teacher:

Last Fall we surveyed a national sample of elementary schools to learn the extent to which our new television series, "The Electric Company," is being viewed by American children at school. Your school was one of those selected and in replying to our questionnaire your principal indicated that some of your pupils have viewed "The Electric Company."

We would now like to learn more about you, your pupils, the conditions under which they are viewing "The Electric Company," and your evaluation of the program to date. The questions which follow may at first glance seem long, but they have been organized to facilitate an easy response: in some cases we have asked you simply to check one of several alternatives; in others we have asked you to express briefly your answer in your own words.

Since this questionnaire is being sent to only a small sample of those teachers in the United States whose pupils have viewed "The Electric Company" (approximately one teacher at each relevant grade level in 250 schools) it is most important that we hear from each and every one of you. A pre-addressed stamped envelope is provided to return this questionnaire to the Research Triangle Institute, which is conducting this survey for us.

Please take a few minutes from your busy schedule to help us improve our television series. Your candid answers to these questions will be of great value in our efforts to revise our program for the 1972-73 school year. Thank you for your assistance.

Sincerely yours,

Joan Ganz Cooney
President

PLEASE ANSWER QUESTION 1 BEFORE CONTINUING

1. Since the beginning of the current school year have any pupils for whom you have a direct instructional responsibility viewed "The Electric Company" at school as a part of their regular school program?

1% a. No, my pupils have never viewed "The Electric Company" at school
16% b. Yes, but my pupils are no longer viewing it
83% c. Yes, and they are still viewing it

THIS QUESTIONNAIRE IS INTENDED SOLELY FOR TEACHERS WHOSE PUPILS ARE CURRENTLY VIEWING "THE ELECTRIC COMPANY" AT SCHOOL. IF YOUR ANSWER TO QUESTION 1 WAS EITHER "a" OR "b" PLEASE RETURN THIS QUESTIONNAIRE UNANSWERED. IF YOUR ANSWER TO QUESTION 1 WAS "c" PLEASE TURN TO QUESTION 2 WHICH IS LOCATED AT THE TOP OF PAGE 2 AND CONTINUE.

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2. Please circle each of the following grade levels for which you have a direct instructional responsibility on a regular basis during the current school year. Then write in the number of pupils whom you are currently teaching at each grade level which you have circled.

Grade Levels Which You Teach (please circle)	Number of Pupils Whom You Teach (please write in)
1st	
(2nd)	603,000
3rd	
4th	
5th	
6th	
Other	

NOTE: THROUGHOUT THE REMAINDER OF THIS QUESTIONNAIRE YOU WILL BE ASKED A SERIES OF QUESTIONS ABOUT "YOUR PUPILS." UNLESS OTHERWISE INDICATED THE TERM "YOUR PUPILS" REFERS ONLY TO THOSE PUPILS WHOM YOU COUNTED IN ANSWERING QUESTION 2 WHO ARE VIEWING "THE ELECTRIC COMPANY" AT SCHOOL ON A REGULAR BASIS.

	Grade						
	1st	2nd	3rd	4th	5th	6th	Other
3. a. How many of YOUR PUPILS at each relevant grade level are currently viewing "The Electric Company" AT SCHOOL? →	-	98%	-	-	-	-	-
b. Approximately how many OF YOUR VIEWING PUPILS . . .							
1) are below grade level in reading skills? →	-	33%	-	-	-	-	-
2) are from families with an annual income of less than $3,000? →	-	8%	-	-	-	-	-
3) come from homes where Spanish is spoken? →	-	3%	-	-	-	-	-
c. How many days per week (d/w) do your pupils in each relevant grade generally view "The Electric Company" AT SCHOOL? →	- d/w	1=4% 2=20% 3=10% 4=13% 5=53%	- d/w	- d/w	- d/w	- d/w	- d/w

4. On what date did any of your pupils first begin to view "The Electric Company" at school on a REGULAR basis? (Note: the first broadcast of the program was on 10/25/71).

___ / ___ / ___
(month) (day) (year)

5. Do your pupils generally view "The Electric Company" in a room with pupils from other classes?

68% No
32% Yes

6. What is the TOTAL number of pupils in this room (including your pupils) at the time "The Electric Company" is being viewed by your pupils?

35.2 pupils

DRAFT

7. Do your pupils view "The Electric Company" in color or black and white?

5% all pupils view it in color
95% all pupils view it in black and white
0% some pupils view it in color, some in black and white

8. On what channel does the signal for "The Electric Company" which your pupils receive originate?

78% channels 1-13 (i.e., VHF)
19% channels 14-60 (i.e., UHF)
3% I do not know

9. In what way is the TV picture for "The Electric Company" which your pupils see received at your school?

36% via an antenna on the TV set (e.g., "rabbit ears")
32% via an antenna on the school to which our set is connected
21% via a cable carrying both commercial and educational channels
11% via a cable carrying only educational channels
- via a cable carrying only commercial channels

10. In general have your pupils experienced reception difficulties in viewing "The Electric Company?"

67% no
19% yes, the quality of the transmission is occasionally poor
4% yes, the quality of the transmission is often poor
9% yes, our television set(s) often do(es) not work well
0% yes, other (please specify: _____)

11. How many TV sets are in use in the room when your pupils are viewing "The Electric Company?" 1.01 set(s)

12. What is the approximate size in inches of the screen on this TV set? (If more than one set please give the average size) 21.5 inches

13. On how many channels can "The Electric Company" be received during your school day? 1.07 channel(s)

14. At how many times can "The Electric Company" be received during your school day? 1.24 time(s)

15. At approximately what time of the day do your pupils view "The Electric Company?"

- before 8 AM
1% between 8 & 9 AM
2% between 9 & 10 AM
2% between 10 & 11 AM
18% between 11 & 12 AM
11% between 12 & 1 PM
38% between 1 & 2 PM
9% between 2 & 3 PM
- between 3 & 4 PM
- after 4 PM

16. From your point of view what would be the most ideal time for your pupils to view "The Electric Company?" (Please check only one)

- before 8 AM
2% between 8 & 9 AM
10% between 9 & 10 AM
18% between 10 & 11 AM
13% between 11 & 12 AM
14% between 12 & 1 PM
30% between 1 & 2 PM
11% between 2 & 3 PM
2% between 3 & 4 PM
- after 4 PM

17. Which of the following best describes the pattern of viewing "The Electric Company" by your pupils?

1% pupils view it at school and are assigned to view it at home as well
55% pupils view it at school and are encouraged to view it at home as well
0% pupils view it at school but are encouraged not to view it at home as well
41% pupils view it at school and are neither encouraged nor discouraged regarding home viewing
3% pupils view it at school but it is not available for home viewing

18. Which of the following best describes the basis upon which your pupils are assigned to watch "The Electric Company?"

83% all pupils whose instruction I am responsible for view "The Electric Company" as a part of their regular reading instruction
11% those pupils who are having difficulty with reading view "The Electric Company" as a supplement to their regular reading instruction
4% those pupils who are doing well in reading view "The Electric Company" as a form of enrichment
2% other (please specify: _____)

DRAFT

19. To the best of your knowledge which of the following individuals participated in the decision which led to pupils in this school viewing "The Electric Company" at school? (Check as many as apply)

- 4% a. school board members
- 6% b. superintendent of schools
- 11% c. central office curriculum coordinator
- 6% d. school curriculum coordinator
- 6% e. central office reading specialist
- 11% f. school reading specialist
- 44% g. principal of this school
- 1% h. principal of other schools
- 81% i. I did
- 35% j. other teachers in this school
- 4% k. teachers in other schools
- 0% l. parents
- 9% m. others (_____)

20. Who do you feel is most responsible for the decision that your pupils should view "The Electric Company" at school? (Please check only one)

- 0% school board
- - superintendent of schools
- - central office curriculum coordinator
- - school curriculum coordinator
- 0% central office reading specialist
- 2% school reading specialist
- 5% principal
- 80% I am
- - another teacher in this school
- 11% a group of teachers in this school
- - a group of teachers in this school system
- 1% other (_____)

21. Who made the final decision with respect to whether or not your pupils would view "The Electric Company?" (Please check only one)

- 0% school board
- 0% superintendent of schools
- - central office curriculum coordinator
- 1% school curriculum coordinator
- - central office reading specialist
- 2% school reading specialist
- 5% principal
- 79% I did
- - another teacher in this school
- 12% a group of teachers in this school
- - a group of teachers in this school system
- 1% other (_____)

22. Which of the following statements best characterizes the previous experience of your school with instruction via television (ITV) at your grade level?

- 22% "The Electric Company" is the first regular use which this school has made recently of ITV at this grade level
- 17% we have previously used ITV at this grade level but currently are not using any program beside "The Electric Company"
- 57% we have previously used ITV at this grade level and the children are currently viewing programs in addition to "The Electric Company"
- 3% other (_____)

23. Which of the following describe how time was created in order for your pupils to view "The Electric Company" at school? (Check as many as apply)

- - a. the school day was lengthened
- 53% b. time which previously was devoted to other forms of reading instruction was made available so that pupils could view "The Electric Company"
- 43% c. time which previously was devoted to another subject was made available so that the pupils could view "The Electric Company"
- 12% d. time which previously was devoted to lunch or recess was made available so that the pupils could view "The Electric Company"
- 6% e. other (_____)

24. Which of the following best describes how the children are seated while they are watching "The Electric Company?"

- 23% they must sit at their desks in their regular location
- - they must sit in auditorium chairs
- 6% they must sit in chairs in front of the television set
- 8% they must sit on the floor in front of the television set
- 61% they can arrange themselves in whatever way they feel most comfortable
- 3% other (_____)

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25. What are the lighting conditions in the room while "The Electric Company" is being viewed?

21% normal lighting
56% slightly darker than normal
20% considerably darker than normal
3% completely dark

26. In general who is supervising the pupils while they are watching "The Electric Company?" (If more than one person please check only the person most responsible for supervising the pupils)

98% their regular teacher
1% a reading specialist
- an audiovisual specialist
0% a teacher aide
- a student teacher
- someone from the school office
- a parent volunteer
0% other (_____)

27. How frequently does each of the following occur while the children are viewing "The Electric Company?" (Please use the following codes: 1=never, 2=very rarely, 3=occasionally, 4=frequently, 5=almost always, 6=always).

4.8 a. the children repeat aloud words being presented by the program
2.4 b. the children write words being presented by the program
5.3 c. the children sing along with the music from the program
1.6 d. the children get up and dance to the music from the program
2.0 e. the children become bored with the program
2.1 f. the children become so noisy that they must be asked to be more quiet
1.4 g. a child has to be sent out of the room for misbehaving during the program
1.2 h. the TV set has to be turned off because the children are not paying sufficient attention to the program

28. While some pupils are watching "The Electric Company" are there other pupils in the room with them who are not assigned to watch the program?

89% no (please skip to Question 30)
11% yes (please continue)

29. What are these other pupils doing?

51% a. reading individually
56% b. writing individually
18% c. working in groups
65% d. other (_____)

30. To what degree has the reading interest of your typical pupils changed as a result of their having viewed "The Electric Company?"

- it has declined
8% it has remained unchanged
64% it has improved slightly
28% it has improved greatly

31. To what degree has the ability of your typical pupils to decode words changed as a result of their having viewed "The Electric Company?"

- it has declined
6% it has remained unchanged
67% it has improved slightly
27% it has improved greatly

32. To what degree has the ability of your typical pupils to spell words changed as a result of their having viewed "The Electric Company?"

- it has declined
18% it has remained unchanged
61% it has improved slightly
21% it has improved greatly

33. To what degree has the basic sight vocabulary of your typical pupils changed as a result of their having viewed "The Electric Company?"

- it has declined
2% it has remained unchanged
66% it has improved slightly
33% it has improved greatly

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34. Assuming that all the technical and administrative problems currently associated with viewing instructional television can be solved, how useful do you feel television can be for the teaching of reading?

- __ of no use
- __ of very little use
- 12% of some use
- 36% of moderate use
- 52% of great use

35. During the 1970-71 school year did you use television as a part of the regular instructional program for your pupils?

- 22% no, not at all
- 11% yes, on rare occasions
- 37% yes, at least once a week
- 15% yes, at least once a day
- 16% I did not teach in 1970-71

36. If each program of "The Electric Company" could be aired more than once a day would you prefer . . .

- 9% that a given program be shown first in the evening and then again the following day?
- 91% that a given program be shown first during the day and then again that evening?

37. How many years of teaching experience do you have?

11.6 years

38. How many years of teaching experience in this school do you have?

5.5 years

39. What is the highest level of education which you have achieved?

- 3% less than a bachelor's degree
- 79% bachelor's degree
- 14% master's degree
- 4% master's degree plus 30 hours
- \- doctorate

40. Which grade are you now teaching? (Please check only one answer).

- \- first grade only
- 88% second grade only
- \- third grade only
- 0% fourth grade only
- \- fifth grade only
- \- sixth grade only
- 7% a combination of grades
- 1% selected pupils from various grades
- 4% other (_____)

41. Which of the following best describes your current teaching responsibilities?

- 78% I teach all of the academic subjects to one class of pupils
- 9% I teach all of the academic subjects to more than one class of pupils
- 4% I teach some of the academic subjects to one class of pupils
- 5% I teach some of the academic subjects to more than one class of pupils
- 2% I am a specialist in reading
- 3% other (_____)

42. In which of the following ways did you hear about "The Electric Company" prior to the first broadcast of the program? (Please check as many as apply).

- 13% a. by watching a TV talk show
- 27% b. by watching the 1/2 hour TV preview
- 3% c. from a radio announcement
- 26% d. from a TV announcement
- 29% e. from a newspaper article
- 26% f. from a professional journal
- 4% g. from a popular magazine article
- 63% h. from a booklet called The Electric Company
- 29% i. from my principal
- 36% j. from another teacher
- 6% k. from the children in my school
- 4% l. from the parents of the children in my school

43. What is your present overall opinion regarding "The Electric Company?"

- 83% very favorable
- 17% slightly favorable
- \- neutral
- \- slightly negative
- \- very negative

44. How does your present opinion regarding "The Electric Company" compare with your opinion when you first saw the program?

- 9% less favorable now than then
- 53% about the same now as then
- 25% somewhat more favorable now than then
- 14% much more favorable now than then

45. Currently how interested are your pupils in viewing "The Electric Company?"

- 80% very interested
- 17% slightly interested
- 2% neutral
- 1% slightly disinterested
- \- very disinterested

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46. In general how interested in viewing "The Electric Company" are your pupils now in comparison to when they first saw the program?

17% less interested now than when they first saw it
47% about the same now as when they first saw it
25% somewhat more interested now than when they first saw it
11% much more interested now than when they first saw it

47. To what degree is some discussion with the children immediately before they see a program of "The Electric Company" useful in helping them to learn what is being taught by the program?

7% prior discussion is absolutely essential
74% prior discussion is helpful, but not essential
19% prior discussion is neither helpful nor detrimental
- prior discussion is detrimental

48. To what degree is some discussion with the children while they are viewing a program of "The Electric Company" useful in helping them to learn what is being taught by the program?

13% concurrent discussion is absolutely essential
55% concurrent discussion is helpful, but not essential
14% concurrent discussion is neither helpful nor detrimental
19% concurrent discussion is detrimental

49. To what degree is some discussion with the children immediately after they have viewed a program of "The Electric Company" useful in helping them to learn what is being taught by the program?

28% subsequent discussion is absolutely essential
50% subsequent discussion is helpful, but not essential
2% subsequent discussion is neither helpful nor detrimental
1% subsequent discussion is detrimental

50. At what time does the school day begin for your pupils?

__- AM

51. At what time are your pupils dismissed for the day?

__- PM

52. During a typical school day how many minutes (ms.) does the typical pupil in your class currently spend in each of the following types of activity?

a. eating lunch	29 ms.
b. playing at gym or recess	37 ms.
c. watching nationally produced instructional television	28 ms.
d. watching locally produced instructional television	9 ms.
e. listening to a tape or record	13 ms.
f. watching a film or filmstrip	13 ms.
g. working at a computer terminal	1 ms.
h. working with a programmed textbook	14 ms.
i. reading a conventional book or textbook	38 ms.
j. writing on printed workbooks or worksheets prepared by a publisher	25 ms.
k. writing on workbooks or worksheets prepared by this school system	8 ms.
l. writing on workbooks or worksheets prepared by you or another teacher in this school	21 ms.

53. Do you get to see a copy of the bi-weekly Guide to Shows for "The Electric Company" before the showing of the programs?

57% no, I have never seen this guide (Please skip to Question 56)
7% yes, I see it very rarely
22% yes, I usually see it
14% yes, I see it before every show

54. How do you receive the Guide to Shows?

14% a copy is mailed to me directly
23% a copy is mailed to one of the other teachers in this school who shares it with me
56% a copy is mailed to our school and circulated among the relevant teachers
7% a copy is mailed to our school system and circulated among the relevant teachers

55. In what ways, if any, could the Guide to Shows be changed in order to make it more useful to teachers at your grade level?

36% responded

56. Are there any technical or administrative problems which currently make it difficult for you to make the best use of "The Electric Company?"

22% responded

57. What types of instructional materials or teaching aids, if any, would help you to make more effective use of "The Electric Company?"

63% responded

58. What is your general opinion regarding the usefulness of "The Electric Company" as a form of reading instruction?

69% responded

59. What do you feel are the most useful reading skills which your pupils have learned from viewing "The Electric Company"

81% responded

60. Are there any additional comments you would like to make regarding your experiences to date in viewing "The Electric Company?"

63% responded

Please Note: The Guide to Shows for "The Electric Company" often features instructional materials suggested by teachers for use in conjunction with the viewing of the program. If you have developed instructional materials or techniques which you would like to share with other teachers we would appreciate hearing from you. You may send such materials to us under separate cover as follows:

Mr. Jack Roberts
"The Electric Company"
Children's Television Workshop
One Lincoln Plaza
New York, New York 10023

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RTI Project
25U-683

APPENDIX D.

TECHNICAL REPORT

CHILDREN'S TELEVISION WORKSHOP SURVEYS
1971-1972

by

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Statistics Research Division
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July 1972

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TECHNICAL REPORT CHILDREN'S TELEVISION
WORKSHOP SURVEYS 1971-1972

A. SAMPLING PROCEDURES, SURVEY OF SCHOOLS

I. Construction of the Sampling Frames and Sample Selection

Sampling was done from three frames:

(1) A magnetic tape list of 1969-70 public schools for the nation and possessions.

(2) A list of private schools occuring in the primary sampling units (area segments) of the National Assessment of Education Progress.

(3) A list of public schools appearing in the NAEP primary units, but not appearing on the tape.

Frames (2) and (3) were necessary because of the incompleteness of frame (1).

Frame 1

The tape list of schools was restricted so far as possible to schools containing at least one of grades 2, 3, and 4. Schools known to be closed were deleted. Because of the lack of enrollment by grade data for some of the schools, the definitions outlined in Table 4 were used to determine membership in this frame. The definitions exclude all schools for which reasonable computer programmable judgements indicate are not likely to have one of the target grades, but include all schools for which no judgement was possible.

On the basis of the location of the state in which the school is situated, the frame was stratified into four regions defined in Table 1. On the basis of characterisitcs associated with the county in which the school is situated,

the frame was further stratified into four size of community strata, defined in Table 2, and into two socio-economic strata, defined in Table 3. Table 5 arrays the numbers of schools in each of these 32 strata together with the number of schools sampled, as follows.

Within each of the 32 strata the schools were ordered by enrollment, using the enrollment figures resulting from the frame membership definitions (approximately the number of pupils in grades 2, 3, 4). Ten unequally sized strata were imposed upon the ordered array of schools in each of the 32 strata to this point, forming 320 strata total. The ten strata proportioned the total schools in the ordered array, from largest enrollment to smallest in the following approximate proportions;

Size Stratum	1	2	3	4	5	6	7	8	9	10
Proportion	0.025	0.05	0.05	0.1	0.1	0.2	0.2	0.1	0.1	0.075

Schools with no enrollment reported, there were 109 of them in the frame, were assigned to size strata numbered 10.

Schools were allocated to the 32 region by SOC by SES strata in approximate proportion to the number of schools in these strata. This number of sample schools was then equally divided among each of the 10 size strata, with the restriction that no fewer than 3 schools per stratum be allocated. The sample schools were chosen from within the 320 strata at random.

Frame 2

Private schools occuring in NAEP primary units were stratified similarly

to the schools in frame 1, except the socio-economic status strata were excluded, and the number of size strata per region by SOC stratum was allowed to vary, depending upon the number of schools involved.

The number of schools and the number sampled are given in Table 6.

Frame 3

A list of schools was prepared from the magnetic tape file of all of the target schools in the NAEP primary units. This list was then compared, school by school, with the current list of schools for these areas. Schools on the NAEP list but not on the tape made up frame 3. A total of 13,058 schools on the tape were checked, and found to be deficient by 495 schools, or 3.79% of those checked.

Only regional stratification was imposed on this frame, and two size strata were imposed upon each regional grouping, making 8 strata in total. The numbers of schools and numbers sampled are given in Table 7.

II. Operations

The survey was originally planned to have three mailings of questionnaires followed by a telephone survey of non respondents to the three mailings. It was soon apparent, especially considering school and postal service holiday periods, and later, Christmas mail volumes, that the schedule developed for three mailings plus the telephone survey left insufficient time between these activities. Consequently, two mailings were undertaken.

The response rate was much lower than was anticipated during initial planning, even considering the reduced number of mailings. Consequently,

the number of telephone calls made was increased. The returns to each mailing are presented in Table 8.

Schools to appear in the telephone survey of non respondents were selected from those schools which had not yet replied by December 10th. (Table 8 includes schools responding since that date but which were not telephoned).

A total of about 500 schools were chosen at random from within the 379 strata previously described. As well, up to three additional schools per stratum were chosen, to be called in case calls could not be completed to one or more of the originally selected schools in the stratum. The closing of many schools during the week preceding Christmas prevented completeing calls to most of these alternates. A summary of the telephone survey is presented in Table 9.

III. Estimation

The magnitude of the non-response problem caused some difficulty with estimation formulations, particularly variance estimation. Non-response implies failure to return a questionnaire, and also failure to answer a specific question on a returned and partially useable questionnaire. The latter problem varies in importance among different questions.

Consequently, the software developed for this analysis had to treat each question separately in obtaining estimates, and have the capability of dynamically collapsing size strata within the region by SOC by SES strata according to the requirements of individual questions.

Basically, the telephone survey is weighted in the analysis to account for the non-response fraction in each stratum; non-response here means

failure to return a questionnaire. Non-response to a question on an otherwise usable questionnaire is handled by differentially weighting the mailed questionnaire fraction of the stratum.

For those strata for which the mailed fraction is zero, the telephone fraction assumes the weights necessary to estimate the whole. For the converse, that is a telephone fraction of zero, there is no estimate of the non-response fraction, and the mail fraction must assume weights appropriate for estimation of the whole. This latter procedure, while less than satisfactory since it can tend to produce over estimates in certain circumstances, was chosen over the only other alternative of excessively collapsing strata. This last alternative was used when both the mail and telephone fractions were zero in a stratum.

Collapsing the size strata involves combining the weights associated with a stratum for which no response was registered with the next stratum in the orderd array (assuming estimates are possible for this stratum).

In the case of variance estimation, the problem is aggravated by the necessity of having more than one observation in each of the telephone and mail fractions in each stratum. Depending upon the particular question under consideration, this situation was not obtained in more than half of the 379 strata.

The variance estimation procedure adopted was to ignore the differentiation between the mail and telephone fractions, and to collapse all the size strata within the region by SOC by SES strata. The former action by itself produces underestimates of the variance, since it essentially ignores the

variance component due to the telephone fraction. The latter action produces an overestimate of the variance, since it ignores the important gains in precision due to the stratification by size of school. The balance is likely to be some over estimation of the variance.

Also, since the telephone fraction is ignored, the estimate for which the variance is computed has no non-response adjustment. This biased estimate is computed in conjunction with the variance estimate. The relative variance is then computed, and this figure is applied to the adjusted estimate as a reasonable estimate of its variance. Table 10 provides an example of the results of these calculations. Entries relate to the percent of pupils in grades one through six who viewed the Electric Company in school as a part of their regular school program.

Definitions:

$Y^m_{\ell,i}$ = an observation from the i-th mail questionnaire in the ℓ-th stratum. (If observations were obtained for all strata, ℓ has a maximum value of 379);

$Y^t_{\ell,j}$ = an observation from the j-th telephone questionnaire in the ℓ-th stratum;

N_ℓ = the number of schools making up the population of the ℓ-th stratum;

n_ℓ = the number of schools sampled from the ℓ-th stratum;

$n_{1\ell}$ = the number of mailed questionnaires received;

$n_{2\ell}$ = the number of mailed questionnaires received which also answered the question of interest; ie had a value of $Y^m_{\ell,i}$;

$m_{2\ell}$ = the number of telephone questionnaires received.

The formulations to follow assume all values other than Y^m and Y^t are fixed.

Estimates of Totals

$$\hat{Y} = \sum_{\ell} \frac{N_\ell}{n_\ell} \left[n_{1,\ell} \frac{\sum_{i=1}^{n_{2,\ell}} Y^m_{\ell,i}}{n_{2,\ell}} + \left(n_\ell - n_{1,\ell} \right) \frac{\sum_{j=1}^{m_{2,\ell}} Y^t_{\ell,j}}{m_{2,\ell}} \right]$$

Estimates of Ratios

The estimator is of the form,

$$\hat{R} = \frac{\hat{Y}}{\hat{X}}$$

where both $\hat{Y}$ and $\hat{X}$ are separately estimated, as formulated for totals.

Domain Estimates

As presented for totals or ratios, except that the form of the response variable is

$$z^m_{\ell,i} = I\, Y^m_{\ell,i}$$

or

$$z^t_{\ell,i} = I\, Y^t_{\ell,i}$$

where I = 1 if the response is a member of the domain, = 0 otherwise.

Variance Estimates

$$\hat{\text{Var}}\,[Y] = \sum_{\ell} \frac{N_\ell^2}{n_\ell} \frac{\sum_{i=1}^{n_{2\ell}+m_{2,\ell}} \left(Y_{\ell i} - \bar{Y}_\ell \right)^2}{n_{2,\ell} + m_{2,\ell} - 1} \left\{ \frac{N_\ell - n_\ell}{N_\ell} \right\}$$

Variance Estimates for Ratios

Define

$$V_{\ell,i} = Y'_{\ell,i} - \hat{R}\, X'_{\ell,i}$$

Compute $\hat{\text{Var}}\,[V]$ as given above.

Then

$$\hat{\text{Var}}\,[R] = \frac{\hat{\text{Var}}\,[V]}{\hat{X}^2}$$

B. SAMPLING PROCEDURES, SURVEY OF TEACHERS

I. Construction of the Sampling Frames and Sample Selection

The lists of teachers' names supplied by the principals comprised the teacher frame; that is, the list of teachers using the Electric Company for classroom teaching as reported by principals who returned a questionnaire containing at least one name. The list totaled 979 names from 251 schools. The disposition of the numbers of names and schools by regional strata is indicated in Table 11.

One teacher was chosen from among those listed for each grade in each school. Sample selection was with equal probability within grade taught. A total of 517 teachers were selected, and the distribution of sample teachers by region is also shown in Table 11.

II. Operations

Three mailings of the teacher questionnaire were undertaken. All non-respondents to the third mailing were contacted by telephone, and asked a subset of the questions on the questionnaire. Questions asked by telephone had to be important to the survey, as well as easily phrased and easily understood to facilitate completing the questionnaire in a reasonable time interval. A total of 148 calls were attempted. The distribution of mailed and telephoned questionnaires is shown in Tables 12 and 13.

The subset of questions asked by telephone were as follows; 1, 2, all parts of 3, 7, 8, 15, 30, 31, 32, 33, 37, 38, 39, 40, 43, 44, 45, 46.

Responses, at least partial, were received from all but 25 questionnaires, for an overall response rate of 96%. It is emphasized that response rates

to individual questions can be much lower than this overall response rate.

III. Estimation

As was the case with the principal questionnaire, non-response adjustments were computed separately for individual answers to individual questions to permit the full utilization of partially completed questionnaires. The adjustment essentially credits the non-responding teacher with the average response of all other teachers teaching the same grade in those schools in the same region by SOC by SES by size stratum. The adjustment is larger in those cases where the teacher was one of many teachers teaching a given grade in a school, than in cases where the teacher was one of a few, or the only teacher teaching that grade in the school. That is, weighted average responses were used for the adjustments, with the weights dependent upon the number of classes of a particular grade using the Electric Company in the school.

In cases where no information was received for a particular question in an entire stratum, the stratum was essentially credited with a weighted average response for all other strata. The weights in this case depend upon the estimated number of schools using the Electric Company in the stratum.

The number of pupils viewing the Electric Company was estimated in both the November and June surveys. In June, in response to the teacher questionnaire, a number of teachers reported that they had never used the Electric Company, even though their names had been given by the principal, or his agent, as users. The November estimates were scaled downward by the same proportion as these teachers were of the total teachers. Such a

scaling assumes the average number of pupils per teacher is the same for non users as users.

Also, there were a number of teachers who reported that they had been using the programme in November, but were no longer using it. By dividing the total number of teachers using in November by the total teachers using in June, an inflation factor can be computed which, again presuming an average number of pupils per teacher similar for both groups, applied to the June estimates should approximate the adjusted November estimates.

The magnitudes of the adjustments and the values of the estimates are shown in Table 14. When viewing this table, it must be kept in mind that both the November and June estimates, and particularly the latter, have associated with them large variances. This variance arises from the relatively few numbers of schools going into the estimates.

However, there may be some justification based on the numbers in Table 14 for concern regarding the possibility of positive bias in reporting numbers of pupils in November, or a negative bias in June. Of the two, the former appears more likely, perhaps arising from a tendency to report enrollment for whole grades when only certain classes were using the program, or reporting the whole class enrollment when only some proportion of the class was involved. A methodological study designed to measure the magnitudes of response bias might be justified in future surveys of this type.

Definitions

$Y_{\ell,i,j}$ = an observation from the i-th school in the ℓ-th stratum for which the teacher had been reported teaching the j-th grade in November;

$M_{\ell,i,j}$ = the total number of teachers reported, in November, as using the Electric Company and teaching the j-th grade (in the i-th school in the ℓ-th stratum);

$\hat{N}_{\ell}$ = the estimated total number of schools in the ℓ-th stratum using the Electric Company, as estimated in the November survey;

n_{ℓ} = the number of schools in the ℓ-th stratum from which at least one answer was obtained;

$M^{*}_{\ell,i,j}$ = those values of $M_{\ell,i,j}$ for those teachers (grades), as above, and who also answered the question (ie registered a non-missing value $Y_{\ell,i,j}$).

Then to estimate the total response,

$$\hat{Y} = \sum_{\ell} \frac{\hat{N}_{\ell}}{n_{\ell}} \sum_{i=1}^{n_{\ell}} \sum_{j} \left(M_{\ell,i,j}\right)\left(Y_{\ell,i,j}\right) \frac{\sum_{i=1}^{n_{\ell}} M_{\ell,i,j}}{\sum_{i} M^{*}_{\ell,i,j}}$$

where the summation over j indicates summation over those grade ranges reported using the Electric Company in November. Where the range of the summation over i is not shown, summation is to be only over those schools for which at least one answer was obtained.

In practice, only those values of $\ell=\ell'$ for which a non-zero estimate of the number of schools using the Electric Company are included in the sum.

The values ℓ' are further restricted to those strata for which $\sum_i M^*_{\ell,i,j} \neq 0$ (or $n_\ell \neq 0$). If this restriction applies, the expression is further multiplied by,

$$\frac{\sum_{\ell=1}^{379} \hat{N}_\ell}{\sum_{\ell'} \hat{N}_\ell}$$

to adjust for missing strata.

As is the case for the analysis of the principals' questionnaires, ratios (or percentages) are estimated by separately estimating the numerators and denominators, as described above. Domain estimates are obtained by defining an indicator variable as described earlier. No attempt has been made to formulate a variance estimator for the estimates obtained in the teacher survey.

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Table 1

DEFINITION OF REGION STRATA

1. North Atlantic

Connecticut
Delaware
District of Columbia
Maine
Maryland
Massachusetts
New Hampshire
New Jersey
New York
Pennsylvania
Rhode Island
Vermont

2. Southeast

Alabama
Arkansas
Florida
Georgia
Kentucky
Louisiana
Mississippi
North Carolina
South Carolina
Tennessee
Virginia
West Virginia

3. Great Lakes and Plains

Illinois
Indiana
Iowa
Kansas
Michigan
Minnesota
Missouri
Nebraska
North Dakota
Ohio
South Dakota
Wisconsin

4. West and Southwest

Alaska
Arizona
California
Colorado
Hawaii
Idaho
Montana
Nevada
New Mexico
Oklahoma
Oregon
Texas
Utah
Washington
Wyoming

Table 2

DEFINITION OF SIZE OF COMMUNITY STRATA

1. All counties containing a central city with a 1970 population of 180,000 or greater.
2. All other counties in the same standard Metropolitan Statistical Area (SMSA) with a Size of Community (SOC) 1 county.
3. All counties not in SOC 1 or SOC 2 but containing at least one city of 25,000 or more in 1970. All SMSA counties not in SOC 1 or SOC 2.
4. All counties not in SOC 1, SOC 2 or SOC 3.

Table 3

DEFINITION OF SOCIO-ECONOMIC STATUS

1. Those counties having the largest proportion of individuals whose annual income is less than $3000; the total population of these counties to be (about) 25% of the total population of the Region by SOC stratum (low SES).
2. All other counties in the Region by SOC stratum.

Note that these definitions imply a variable proportion of individuals with income less than $3000. For example, in the Northeast Region, SOC 2, low SES counties are those in which 11.2% or more of the individuals have income less than $3000. In the rural southeast, the percentage is 56.2%.

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Table 4

DEFINITIONS OF SCHOOLS INCLUDED IN FRAME 2

Definition	Number of Schools Excluded	Included
1. Closed Schools	4,374	0
2. Open schools, no enrollment data of any kind	0	2,071
3. Open schools, no enrollment in ungraded or special education classes, enrollment in at least one of grades 2, 3, 4 not zero	19,211	44,633
4. Open schools, at least one of ungraded or special education not zero, and at least one of pre-kindergarden through grade 8 present	0	23,904
5. Open schools, at least one of ungraded or special education not zero, and at least one of freshman through post graduate present	3,170	0
6. Open schools, with at least one of ungraded or special education present, but no other enrollment data	0	1,574
Totals*	26,755	72,182

*Totals include United States possessions

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Table 5

NUMBERS OF SCHOOLS IN DESIGNATED STRATA, FRAME 1

Region	Size of Community	Socio-Economic Status	Number of Schools	Number Sampled
1	1	1	1,282	40
1	1	2	1,371	40
1	2	1	1,083	30
1	2	2	2,826	90
1	3	1	1,553	50
1	3	2	3,757	120
1	4	1	902	30
1	4	2	2,046	60
2	1	1	476	30
2	1	2	1,203	40
2	2	1	261	30
2	2	2	459	30
2	3	1	1,157	30
2	3	2	3,040	100
2	4	1	2,384	70
2	4	2	5,983	190
3	1	1	1,208	30
3	1	2	3,488	70
3	2	1	738	30
3	2	2	1,864	40
3	3	1	1,431	30
3	3	2	3,530	70
3	4	1	3,514	70
3	4	2	7,126	150
4	1	1	1,389	50
4	1	2	3,923	150
4	2	1	391	30
4	2	2	957	30
4	3	1	1,249	50
4	3	2	3,421	130
4	4	1	1,334	50
4	4	2	4,515	180
Total			69,861*	2140

*Total excludes United States possessions

Table 6

NUMBERS OF SCHOOLS IN DESIGNATED STRATA, FRAME 2

Region	Size of Community	Number of Schools	Number of Size Strata	Number Sampled
1	1	1106	10	30
1	2	369	4	12
1	3	348	4	12
1	4	23	1	3
2	1	108	2	6
2	2	82	1	3
2	3	70	1	3
2	4	23	1	3
3	1	1003	10	30
3	2	80	1	3
3	3	63	1	3
3	4	47	1	3
4	1	917	10	30
4	2	29	1	3
4	3	124	2	6
4	4	18	1	3
Total		4410	51	153

Table 7

NUMBERS OF SCHOOLS IN DESIGNATED STRATA, FRAME 3

Region	Number of Schools	Number Sampled
1	139	6
2	83	6
3	134	6
4	139	6
Total	495	24

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Table 8

RESPONSE TO MAILED QUESTIONNAIRES

	Number Mailed	Returned by Principal		Returned by Post Office	
		Number	Percent	Number	Percent
Mailing 1	2318	530	22.9	48	2.1
Mailing 2	1788	273	15.3	0	0.0
Total		803	34.6	48	2.1

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Table 9

SUMMARY OF TELEPHONE SURVEY

Disposition	Number of Calls
Completed questionnaires	233*
Mailed new questionnaire	90*
Schools not listed in directory	41
No answer	30
Call backs	37
Already mailed questionnaire	22
Promises to mail questionnaire	50*
Schools closed	5
Schools refusing cooperation	16
Unable to complete call	2
Number disconnected	1
Total	527
*Total expected completed questionnaires as a result of telephone survey	373
Total actual completed questionnaires	248 (47.1%)

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Table 10

EXAMPLE OF VARIANCE ESTIMATES

	Grade					
	1	2	3	4	5	6
1. Estimate of percent pupils using TEC	7.5	16.3	14.4	6.9	3.8	1.9
2. Estimate for which variance is computed	10.2	20.1	17.3	8.2	4.3	2.9
3. Relative variance (%)	6.83	2.08	2.32	2.49	3.00	14.2
4. Approximate 95% confidence range around estimates, line 1	±3.9	±4.7	±4.4	±2.2	±1.3	±1.4

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Table 11

DISTRIBUTION OF TEACHER NUMBERS AND TEACHER SAMPLE BY REGION

	Region				Private Schools
	1	2	3	4	
Total teachers reported	176	276	178	291	58
Total Schools	50	50	56	79	16
Teachers Sampled	96	109	105	175	32

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Table 12

RESPONSE OF TEACHERS TO MAIL AND TELEPHONE SURVEY

	Region				
	1	2	3	4	Private Schools
Total questionnaires, first mailing	96	109	105	175	32
Percent returns	48	46	53	47	31
Total questionnaires second mailing	50	59	49	93	22
Percent returns	18	36	43	21	50
Total questionnaires third mailing	41	38	28	73	11
Percent returns	12	26	14	23	54
Total completed telephone calls	29	21	21	49	4
Total non-response	7	7	3	7	1
Percent non-response	7	6	3	4	3

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Table 13

REASONS FOR NON-RESPONSE

Item	Number of telephone calls
Hawaii (not called)	1
Needs district approval	2
Maternity leave	1
Answered on another teacher's questionnaire	1
School not listed	2
No longer with school	16
Refused to cooperate	2
Total non-response	25

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Table 14

NOVEMBER AND JUNE ESTIMATES OF THOUSANDS OF PUPILS USING THE ELECTRIC COMPANY

Thousands of Pupils Using Tec

	Grade						
	1	2	3	4	5	6	Other
ovember Estimate	304	682	595	287	158	82	-
roportion teachers ever using	.2078	.0142	.1257	.1030	.4222	.3766	.0711
djusted November Estimate	241	672	520	257	91	51	-
une Estimate	167	507	268	185	70	15	15
eachers using November Teachers using June	1.1403	1.1896	1.3526	1.3995	1.3495	1.3683	1.1597
une Estimate djusted to November	190	603	362	259	94	20	17
eviation ovember - June	51	69	158	-2	-3	31	