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Use of tape recorder in Modesto elementary schools and other California schools

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**USE OF TAPE RECORDER IN MODESTO ELEMENTARY SCHOOLS
AND OTHER CALIFORNIA SCHOOLS**

**A Thesis
Presented to
the Faculty of the Department of Education
College of the Pacific**

**In Partial Fulfillment
of the Requirements for the Degree
Master of Arts**

**by
Virgle Louis Giddens
July 1957**

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CHAPTER I

THE PROBLEM AND DEFINITIONS OF TERMS USED

The magnetic tape recorder has been in use only since World War II; however, it is rapidly becoming one of the most valued pieces of equipment in the public schools. Before World War II the only means of recording sound was the disk recording machine. The wire recorder was developed during the war. Both methods were limited in use, however. The disk recorder was complicated to operate, bulky, limited in length, and could not be erased or edited, thus becoming more expensive over a period of time. The wire recorder was an improvement over the disk recorder but still not as practical as the magnetic tape recorder. The wire recorder was more difficult to operate, it had a greater loss of high-frequency, and it was hard to edit. If the machine was stopped too suddenly there was a tendency for the wire to "back lash" and snarl. Much less could be recorded on the wire recorder.

The broadcasting companies were first to make use of the tape recorder after it was brought back from Germany as a prize of war. The tape recorder at the end of World War II was more highly developed in Germany than elsewhere. The recording companies eagerly adopted and further developed this convenient recorder. It was just a matter

of time before educators began to see the potential of its use in the educational field. Immediate uses were found for it in such subjects as reading, speech, music, science, foreign language, and others.¹

I. THE PROBLEM

Statement of the problem. It was the purpose of this study (1) to find out what use is being made of the tape recorders as shown by the literature; (2) to find out by questionnaires to what extent they are used in the city school districts of California; (3) to find out by personal interviews the extent to which they are used in nearby counties and comparable neighboring school districts; (4) to determine the administrative practices and extent of use of tape recorders within elementary schools of the Modesto City School District, and (5) to recommend a program of administration and use of tape recorders based upon the findings of this survey.

Importance of the study. The status of the tape recorder in the educational field was unknown at the time

¹C. G. Burke, Edward Tatnall Canby, and Irving Kolodin, The Saturday Review Home Book of Recorded Music and Sound Reproduction (Englewood Cliffs, New Jersey: Prentice-Hall, Inc., 1956), pp. 60-61, 72.

of this report. An attempt was made in this study to describe current practices and evaluate the potential of this medium and the growth of its use.

II. DEFINITIONS OF TERMS USED

✓ Magnetic recorder. The term "tape recorder" hereafter mentioned in this report refers to the magnetic tape recorder. The function of this machine is to record sound through the medium of magnetic tape so that it may be reproduced immediately and utilized by the teacher to further the educational program in the classroom.

Speed. Recording machines operate at various speeds. Current model speeds are 3.75, 7.5 or 15 inches per second. The greater the speed of the tape passing over the recording head the better the quality of sound. The slower the tape moves the more material can be recorded, thus making the 3.75 inches per second more economical but sacrificing the fidelity of sound. The speed of 3.75 inches per second, in general, is adequate for most reproductions as it will reproduce sounds with a quality equal or better than the best in radio reception.²

²Tape Recording in the Classroom. Handbook for Teachers and Administrators (St. Paul, Minnesota: Minnesota Mining & Manufacturing Company), 20 pp.

✓ Track. Two types of track are on tape recorders. Single track refers to recorders with heads that record one way on the tape. Double or twin-track machines are so equipped that recording is on the lower half first and when tape is reversed recordings can be made on the upper half of the tape. Needless to say, the twin-track machine is more useful for long programs. A twelve hundred foot tape on 3.75 inches per second is sufficient to tape a two-hour program on a twin-track machine.

✓ Dubbing. The term "dubbing" is used in reference to one tape being duplicated from another tape.

III. HOW DATA WERE COLLECTED

Questionnaires. Ninety-five questionnaires were sent out to California city schools. The names were taken from the Directory of Administrative and Supervisory Personnel of California Public Schools, 1955-1956.³ Some schools were unified and some were not, but all were city school systems or had the status of city school districts under Education Code Section 4629.

³California State Department of Education, Directory of Administrative and Supervisory Personnel of California Public Schools, Vol. XXV, No. 7 (Sacramento, California: California State Printing Office, 1955-1956), pp. 5-6.

Eighty-six (90 per cent) of the questionnaires mailed were returned. The survey was sent, when possible, directly to the Director of Audio-Visual or the Director of Instructional Material. If the person in charge of audio-visual was not listed in the directory, the letter was sent to the Superintendent of Schools in care of the Audio-Visual Director. The questionnaire contained twelve questions.⁴

✓ Interviews. Personal interviews were sought from six surrounding schools of various sizes within a radius of fifty miles from Modesto. The purpose of these interviews was to visit each school and make a study of what was being done concerning the use of the tape recorder. Questions were asked and opinions were sought on what each administrator was doing and what he thought the future held for the tape recorder in the school program. No particular attention was paid to size, but, in general, the school systems ranged from one school to five schools. Names of the districts interviewed were: Lodi, Turlock, Oakdale, and Keyes.

Interviews were also obtained from the Audio-Visual Director of San Joaquin, Stanislaus, Merced, and Tuolumne Counties. A checklist of fourteen questions was used.

⁴Appendix, pp. 85-86.

CHAPTER II

REVIEW OF THE LITERATURE

The tape recorder is still a comparatively new medium of reproducing sound. Therefore, only a limited number of books have been written on this subject. The literature printed between 1946 and 1950 devotes very little material on the subject. There is an increasing number of magazines and periodicals published about the tape recorder.

This chapter contains two parts of the survey of the literature. The first is a brief history of the magnetic recorder, and the second is the use that is being made of this versatile machine.

I. A BRIEF HISTORY OF THE MAGNETIC RECORDER

The first wire recorder was developed by Valdemar Paulsen in Denmark in 1898, and his telegraphone was sold and used for commercial uses for several years. A limited number were used in the United States.¹ The basis of his invention was the variable magnetization of a continuous, moving metal medium--wire.

¹Fundamentals of Magnetic Recording (New York: Audio-Devices, Inc., 1951), p. 5.

The magnetic tape recorder first reached this country at the end of World War II. Unknown to the Americans the Germans had developed it and were making use of it successfully while the Americans were still struggling with the wire recorder. The German magnetophone was seized as a prize of war and brought to the United States, where improvements were made. In only three years after the war many broadcasting companies had converted to tape, and the phonograph industry quickly followed.

It was found by radio officials that a tape "transcription" recorded ahead of time was indistinguishable on the air from a "live" program; and that there was tremendous value in tailoring and editing before playing the final program.²

From 1948 the phonograph industry has been using tape for all original recordings. These were found to be superior to the old method of using disks. A tape copy was, in general, an exact duplicate of the original music or other sounds. It was much better than the old style disks. In spite of the best recording equipment available, the

²C. G. Burke, Edward Tatnall Canby, and Irving Kolodin, The Saturday Review Home Book of Recorded Music and Sound Reproduction (Englewood Cliffs, New Jersey: Prentice-Hall, Inc., 1956), pp. 60-61, 72.

needle sound was still detected. This was not true in a magnetic tape copy.³

By 1950 the magnetic tape recorder was in such demand that it could be produced in enough quantity to make it reasonable in price to the public. Educators immediately saw the educational possibilities. Much progress had been made already with the disk recorders, but here was a machine that appeared to be superior to and more practical than any other sound producing method. By 1952 many schools were experimenting with various uses of the tape recorder in the classroom. Soon large universities and some State Departments of Education were making tape programs available. Twenty-two different states have "Tapes for Teaching" programs which have been prepared by well-known specialists.⁴ Later, tapes prepared by the Minnesota State Department of Public Instruction were made available to other state programs. A new Nation Tape Recording Catalog has been released by the Department of Audio-Visual Instruction, National Education Association, listing many programs available through the National Depository Audio-Visual Center.

³Ibid., pp. 78-79.

⁴Robert De Kieffer and Lee W. Cochran, Manual of Audio-Visual Techniques (Englewood Cliffs, New Jersey: Prentice-Hall, Inc., 1955), p. 156.

Kent State University, Kent, Ohio.⁵

In most instances these tapes are not on loan basis, but the school requesting must send a blank tape in return for a copy. Subjects covered are: conservation, child development, English, speech, foreign language, guidance, history, music, science, and social studies. Many schools are also taping directly from educational radio programs.

II. WHAT ARE OTHER PEOPLE DOING IN THE FIELD?

Purpose of the Tape Recorder in the Schools

The Minnesota Mining and Manufacturing Company, makers of the "Scotch" Magnetic Tapes, define the purpose of the tape recorder. The company's handbook on tape recorder states:

Educators tell us the only evidence of learning is a change in behavior. The sole reason for using audio-visual aids, then, is to create, sustain and make permanent the desired behavior patterns. Tape recordings have no inherent magic with which to do this. They will never supplant the warmth and liveliness of a good instructor. One role of the instructor in using audio-visual aids is to personalize the aid. Restated, we might say the recorder is not a teacher; it is a teaching and a learning aid. As such, it enables the instructor to do a superior job of teaching.⁶

⁵Ibid., p. 156.

⁶Tape Recording in the Classroom, Handbook for Teachers and Administrators (St. Paul, Minnesota: Minnesota Mining and Manufacturing Company), 20 pp.

Organization. The literature shows the field is new and as a result many schools are using tape recorders experimentally. It is not uncommon for a school to be issued a machine with very little instruction given to the staff in its operational or educational use. This indicates there is a definite need for an adequate in-service training program.

There seem to be four steps in starting a taping program in a school. First, a tape recorder must be purchased. A desirable distribution is one recorder for every five or six elementary teachers and one for every ten high school teachers.⁷ Second, an in-service training program must be started immediately in order to help teachers overcome fear of the mechanical operation of the machine and also to encourage its use. Third, there should be a definite way of obtaining a supply of tapes. Fourth, there should be a system of storing and cataloging material which had been produced with the intention of keeping it for permanent use. The program can "bog" down rapidly if teachers cannot find tapes quickly when there is a need for them.

⁷I. Keith Tyler, "Put It On Tape," NEA Journal, 46:2, February, 1957.

More information was brought out in an article by Merlyn Herrick, Production Supervisor and Instructor of Audio-Visual Center, Indiana University. Two reasons that the tape recorder is used far below its capabilities in many classrooms were given. These reasons are:

1. Tape recorders, despite design advances are still among the heavier pieces of the audio-visual equipment. Teachers, especially women, hesitate to tote them except for major projects, and thus remain relatively less experienced with them.

2. The acoustical problems common to most classrooms sometimes interfere with the quality of recording.⁸

Herrick goes on to give possible remedies for these two problems. He suggests a portable cart for the heavy recorder and the use of older children to deliver them to the rooms.

A possible aid to poor acoustics in the room is to turn one corner of the room into a sound booth. This can be done by placing old blankets and rugs along the wall. Better recording can be made by having the pupil hold the microphone close to his mouth and talk "past" the mike instead of directly into it. This eliminates the hissing "s" sounds as well as the "pop" of the "p," "b," "d," and

⁸Merlyn Herrick and Henry C. Ruack, Jr. "Betterways to High Quality Tape Recording," Educational Screen and Audio-Visual Guide, 35:514-15, December, 1956.

"t" sounds.⁹

The purchase of the tape recorder. Lewis Cowgill, Audio-Visual Coordinator, Senior High, Parma, Ohio, set up certain standards for selecting a tape recorder. They are as follows:

1. Choosing the right recorder for the right job is essential. Find out what you expect the recorder to do.

2. Watch the compactness and the weight. Teachers expect to carry the machine around so it should not exceed thirty-five pounds in weight.

3. The tape speeds and their uses are important. Most recorders have 7 1/2 and 3 3/4 inches per second. The first one (7 1/2) has better quality for music but runs faster, therefore less economical. The 3 3/4 is generally used for voice with very little loss of high frequency sound. The third speed (1 7/8) is not too practical in the classroom.

4. Frequency response or tone range is also to be considered. Frequency should be high enough to produce the "S" and "C" sounds correctly.

5. One of the most important factors to be considered is the ease of operation. It must be easy to operate otherwise timid people will not attempt to operate it. There are two types of machines in respect to operation. The push-button type which is more likely to need occasional repairs and the mechanical type. The mechanical machine is easier to edit.

6. Prospective buyers are cautioned to watch the driving mechanism. The machine using direct motor-to-capstan drive is more economical over a period of time. Machines that are belt driven are more likely to slip and need occasional repairs.

⁹Ibid.

7. If a great deal of editing is anticipated the mechanical operated machine is better than the push-button type. It is easier to find the exact place on the tape.

8. When selecting the machine for its recording head, the buyer should keep in mind these points. A single head is better when editing is expected. A double head recorder is better if not much editing is expected and long programs are to be recorded.

9. The fast forward and rewind feature is important on a machine. Some machines with other fine features are slow on the rewind. A machine should rewind in no less than twenty feet per second. A 1200 feet tape should run through in one minute.

10. A person looking for a recorder should check on an output for an extension speaker. This speaker is helpful in a large building where the usual speaker is not enough.

11. An external speaker is needed when the buyer expects to monitor programs. *microphone*

12. The operator must be informed in how to operate the machine. It must be simple enough for the busy teacher to turn on and still maintain an orderly class without being frustrated with a complicated machine.

13. A workshop for teacher training should be set up for informing teachers; not only in the operation of the machine but how to make use of the recorder in an educational learning situation.¹⁰

Uses of the tape recorder. The investigator found very little in the textbooks about the tape recorder; however, considerable information had been written in audio-visual magazines, periodicals, and commercial companies'

¹⁰Lewis Cowgill, "Selecting a Tape Recorder for Your School," Audio-Visual Guide, 22:30-32, May, 1956.

publications. Many teachers wrote about their experiences through the trial and error method. In general, there was much duplication of material.

1. The reading program has greatly benefited by the tape recorder. (1) In Reading Readiness the children are made conscious of a variety of sounds in the world about them. (2) The wonder of being able to hear one's own voice presents limitless advantages to youngsters. (3) Reading orally into the recorder and playing back to analyze is helpful to children. (4) A tape recording for a parent conference gives the parent a more realistic view of his child's problems and achievements. (5) Preparing for assembly programs by letting the children practice over the recorder and evaluate encourages children to strive for improvement. (6) Helping a slow reader by letting him hear his stumbling and repeating will bring results also.¹¹

There is no research to prove these contentions, but, in general, this is how many feel who have worked with the tape recorder.

2. The Language Arts program has found many uses for the recorder. Children develop creative expression by

¹¹Henry C. Fox, "Evaluating Reading with the Tape Recorder," The Instructor, 64:111, November, 1954.

writing stories, poems, and songs when they can record them on tape. They have a listening period when their efforts are played back for the class in the form of a program. Correct usage can be taught to advantage with a recorder. Children select the correct form of verb by marking a plus or minus mark on paper when a sentence is heard over the recorder. A good device for improving spelling, punctuation, and developing sentence sense, is for the teacher to dictate over the recorder and let children write correctly.¹²

3. Dramatics was another field where the tape recorder had been found useful. Such activities as skits, playlets, radio shows, pantomimes, man-on-the-street broadcasts and class plays had been made interesting and meaningful through the aid of the recorder.¹³

4. Many activities in the music field can be stimulated by the tape recorder. Some of those benefiting are as follows: music for outdoor festivals, introducing new songs, instrumental accompaniment, orchestra and band practice, marching, combining orchestra and chorus, mood

¹²Claude D. Bickler, "A Syllabus of the Tape Recorder," The Teacher Talks About Sound Recording (New York: Audio Devices, Inc., 1953), pp. 3-4.

¹³Ibid., p. 5.

music for art, rhythm activities, square dancing, and luncheon music.¹⁴

5. More and more elementary schools are teaching foreign languages with the aid of the tape recorder. Oral rather than written speech predominates in these classes. With the tape recorder the children can readily test their own pronunciations. Letters are also sent to foreign students in exchange for English letters.¹⁵

6. Some other uses found for the recorder were special activities such as: fund drives, safety patrols, P.T.A., disciplinary use and faculty use. Fund raising drives for the Junior Red Cross, savings clubs, or paper drives were stimulated by recorded speeches and pep talks that can be taken from room to room to be played. Messages appealing to the youngsters to walk instead of run can be repeated on "endless" tape in strategic places in the school corridors when classes move through the halls. Parents become enthusiastic supporters of the school when they can hear with their own ears what results teachers have been accomplishing with their child. Teachers who attend

¹⁴Lester B. Sands, Audio-Visual Procedures in Teaching (New York: The Ronald Press Company, 1956), p. 447.

¹⁵Ibid., p. 445.

conventions can make arrangements to record the entire proceedings. Upon their return the tape can be listened to by other interested teachers within the school.¹⁶

7. Speech defects can be minimized with the use of a tape recorder. The stutterer will often be able to speak clearly and distinctly on tape, especially if he can record entirely alone. Some children need a lot of practice since they often fail to hear the lisp. Primary children, who still use baby talk will benefit from the use of the recorder.

8. Current events can be taped from radios or television sets at off-hours and played back to the class at school time.

9. The tape recorder can be used to give the children the basic one hundred addition, subtraction, and multiplication facts and the ninety division facts needed in review. The teacher can give them with the aid of a stop watch. The students can write down only the answer. Answers may also be taped and played to the children. This releases the busy teacher for other duties. The recorder can also be used as a stimulus for mental arithmetic.

¹⁶Taylor, op. cit., pp. 98-99.

10. Teachers of special classes such as the slow learners, blind and sight-saving classes, and shut-ins make use of the tape recorder and report success.

The information gathered for paragraphs 7, 8, 9, and 10 are not scientifically proven facts, but from a commercial publication. These statements are generally accepted by many educators.¹⁷

Tape recording library. Many occasions will arise when what has been recorded in general could be considered valuable and worthy for a permanent place in the library for further use. More and more schools are discovering the importance of a school library of recordings from local school programs, recordings from the radio or from tapes received from a "Tapes for Teaching" center. Money should be allowed in the budget to cover the expense of participation in the "Tapes for Teaching" program in the systems where the service is available. Twenty states now have in operation duplication centers in which a wide variety of permanent recordings are available if the school will send a blank tape and request a certain program. In addition, several "Tapes for Teaching" libraries are operating on a national basis, serving those schools which

¹⁷The Tape Recorder in the Elementary Classroom, A handbook of tested uses (St. Paul, Minnesota: Minnesota Mining & Manufacturing Company, 1955), pp. 4-44.

are without the services of a state-operated "Tapes for Teaching" center. States having the services at the time of this report are: Arizona, Connecticut, Illinois, Iowa, Massachusetts, Michigan, Mississippi, Montana, Nebraska, New York, North Dakota, Ohio, Oregon, Pennsylvania, Rhode Island, South Dakota, Texas, Utah, Washington, and Wisconsin.¹⁸

The Department of Education of Minnesota encourages the use of tape recordings in the school by providing a tape recording service. The school that wants a program sends a blank tape with the return postage. The desired recording is duplicated from a master tape. An evaluation card is sent to the applicant. These tapes are also made available to other State Education Department.¹⁹

Garland C. Bagley, Director of Audio-Visual Services, State Department of Education, Atlanta, Georgia, tells about their taping program. Bagley writes:

Georgia's new tape library, started in 1955, is geared to give the finest and best balanced audio-visual program in the nation. A statement by the department was as follows: "It is believed that the magnetic tape will prove to be the most inexpensive, flexible and convenient auditory medium yet devised. It presents all the advantages of the AM and FM radio

¹⁸Lester B. Sands, Audio-Visual Procedures in Teaching (New York: The Ronald Press Company, 1956), p. 441.

¹⁹Ibid.

without radio's inflexibility of programming. Unlike a school radio receiver a tape recorder can be profitably used in many other school and community situations. Tape is cheap, particularly in view of the fact it can be recorded, played back, erased and re-recorded literally hundreds of times without appreciable deterioration.²⁰

Other information given by Bagley is that all master tapes are recorded on 7 1/2 inch per second speed and can be reproduced to suit the applicant's need. Copies are made on any speed the applicant desires. Single or double track is also optional. Another feature of this service is that a time clock set-up is hooked to the radio or television set and the recording can be made automatically after working hours.²¹

III. SUMMARY

There is more literature from the periodicals and commercial companies' publications than from textbooks. Textbooks printed before 1950 had very little information on the uses of the tape recorder.

The wire recorder was used by the Americans during World War II. The magnetic tape recorder, discovered in Germany, in 1945, was brought back to the United States as

²⁰Garland C. Bagley, "Georgia's Tape Program," Educational Guide, 34:216-17, May, 1955.

²¹Ibid.

a prize of war, and great progress was made in its use.

Radio companies were the first to make use of the tape recorder after the war with the phonograph companies second and the educators and the public as third and fourth.

There are many problems connected with the use of a tape recorder in a school system. There is a distinct need for in-service training in both the mechanical operation and utilization in the educational program. There are many problems when selecting a tape recorder for a school. One general rule to keep in mind is to buy the recorder to fit the program. Try several before buying.

There are many uses for the recorder and more being found as time goes on. Some of the first uses were found in music, reading, language arts, social studies, science, and foreign languages. Some of the newer uses found are special activities such as P.T.A., discipline, fund drives, and reports from faculty members when they attend conventions.

CHAPTER III

WHAT IS BEING DONE AS DETERMINED BY THE QUESTIONNAIRE

In order to determine how other city school systems were making use of the tape recorder, it was necessary to have a method of collecting material.

I. QUESTIONNAIRE

How data were collected through the questionnaire.

The purpose of this section is to explain how the questionnaire was used in collecting information for this study. It was decided by this investigator to send a questionnaire to each audio-visual director in all city school systems in California. A form was devised and approved by the thesis committee. Each city school system, and each system with equivalent status, were sent questionnaires. A mailing list was obtained from the Directory of Administrative and Supervisory Personnel of California Public Schools, 1955-1956. If the directory did not list an audio-visual director in a school system the letter was sent to the Superintendent of Schools in care of the Audio-Visual Department. The questionnaire was mimeographed and each one was accompanied by a self-addressed stamped envelope. A copy of the questionnaire and the follow-up letter can be found in the Appendix, pages 82-84.

Distribution of the questionnaire. Ninety-five questionnaires were sent during the first week of October 1956. Sixty-five had been returned by November 15, 1956. A follow-up letter was sent and by December 15, 1956 there was a total return of eighty-six responses, or 90 per cent. It is the opinion of this investigator that the individually typed follow-up letter was largely responsible for the return of the last 20 per cent.

Sixty audio-visual directors stated they wished to have the results of the study. A copy of the letter containing the data is on page 85 in the Appendix.

II. RESULTS OF THE INFORMATION RECEIVED THROUGH THE QUESTIONNAIRE

Summary of the data of the questionnaires. When the completed questionnaires were returned the results were tabulated. All schools were listed in alphabetical order. Pertinent questions were listed in columns and the results checked in appropriate places. The information is shown in Table I.

The largest school system to reply to the survey was Los Angeles. The smallest system was Huntington Beach. The Los Angeles School System listed four hundred elementary schools. Huntington Beach was careful to note there were forty-one rooms in its one school in the system.

TABLE I

THE TABULATION OF EIGHTY-SIX QUESTIONNAIRES SENT TO CITY SCHOOLS OF CALIFORNIA

Name of School System	No. of Schools in system	Number of Recorders in system	Subjects in which Recorder is used. The number indicates the place of importance.						Has the Recorder been effective in your system?
			Reading	Language Arts	Music	Speech	Soc. Studies	Dramatics	
Albany	4	1 per school	5	1		2	4		Yes
Alhambra	11	1 per school		1	2		3		Yes
Anaheim	16	Only 3 recorders		2		1			Yes
Antelope	5	1 per school	1	2	3				Yes
Arcadia	7	1 per school		1					Yes
Bellflower	14	1 per school				2			Yes
Beverly Hills	4	1 for every 2 schools	1	1	2	4			Could be improved
Burbank	16	1 per school (5 at Central Office)							Yes, but need more
Chico	10	5 recorders		1	3		2		Yes
Chino	4	1 per school	1		1	4			Yes
Chula Vista	15	3 in system (4 at Central Office)				1			Yes

TABLE I (continued)

Name of School System	No. of Schools in System	Number of Recorders in System	Subjects in which Recorder is used. The number indicates the place of importance.						Has the Recorder been effective in your system?
			Reading	Language Arts	Music	Speech	Soc. Studies	Dramatics	
Compton	19				1	2			
Cornado	3	1 for every 2 schools			1	2			Yes
Culver City	7	1 per school		3	1	2			Yes
Downey	4	1 per school	1	2	3				Moderately
East Whittier	10	1 per school		2	3	4	1		Moderately
El Monte	13	5 only	4		1	2	3		Yes, indispensable
El Segundo	4	1 per school			1	2		3	Yes
Eureka	10	1 per school			1	2		3	Yes
Fresno	35	1 for every 2 schools	1	4	3	2			Yes
Glendale	20	1 ea., 15 schools		1	2				
Grass Valley	4	1 for every 2 schools	1		2				Yes
Huntington Beach	1 (41 classes)	4 recorders		3	1	2			Yes

TABLE I (continued)

Name of School System	No. of Schools in System	Number of Recorders in System	Subjects in which Recorder is used. The number indicates the place of importance.						Has the Recorder been effective in your system?
			Reading	Language Arts	Music	Speech	Soc. Studies	Dramatics	
Las Mesa	12	1 per school			1		2		Moderately
Lindsay	12	1 per school	1	2	3				Yes
Little Lake	10	6 recorders		2	3	1			Yes
Long Beach	51	1 for ea. 5 sch.			2	1		3	Yes
Los Angeles	400	1 per school	1	2	3				Yes
Lynwood	9	1 for every 2 sch.	3		2	1			Yes
Maryville	3	1 per school	3		1	2	4		Not as much as would like
Menlo Park	5	1 per school			2	1			Yes
Merced	10	1 for every 2 sch.			1	2			Yes
Montecello	18	2 schools have 1 5 from Gen. Ofc.	?		?	?	?		Not enough time to develop
Monterey	16	1 per school		1					No
Mt. Diablo	23	1 per school	1	2	3				Not yet
Newport Beach	5	1 per school	1		3	2			Yes
Norwalk	19	1 for every 2 sch.			1	3	2		Did not indicate
Orange	10	1 for every 2 sch.			2	1			Yes
Orville	5	1 for every 2 sch.	3		2	1	4		Yes

TABLE I (continued)

Name of School System	No. of Schools in System	Number of Recorders in System	Subjects in which Recorder is used. The number indicates the place of importance.						Has the Recorder been effective in your system?
			Reading	Language Arts	Music	Speech	Soc. Studies	Dramatics	
Pacific Grove	3	1 for every 2 sch.							Limited
Palm Springs	7	3 in schools		2	1				Yes
Palo Alto	20	1 per school			2	3	1		Yes, definitely
Paramount	10	1 per school				1			Yes
Pasadena	26	1 per school	4	2	3		1		Not as it should be
Piedmont	3	1 per school		2	1			3	Yes, definitely
Pittsbrugh	6	1 per school	2		3	1			Yes
Plumas	11	1 per school	1				2		Yes
Pamona	16	1 for every 5 sch.	3	2	1	4			Yes
Porterville	8	3 only		2	1				Yes
Redondo Beach	12	1 for every 2 sch.							Did not indicate
Redwood City	15	1 per school			2	1		3	Yes
Richmond	24	1 per school	1	2	4		3		Yes
Riverside	22	1 per school	1	2	3				Yes
Roseville	5	1 for every 2 sch.					1		Yes
Sacramento	30	1 for every sch.			1	2	4	3	Yes
Salinas	7	1 per school		4		1	2	3	Yes

TABLE I (continued)

Name of School System	No. of Schools in System	Number of Recorders in System	Subjects in which Recorder is used. The number indicates the place of importance.						Has the Recorder been effective in your system?	
			Reading	Language Arts	Music	Speech	Soc. Studies	Dramatics		
San Bernardino	32	1 per school			2			1	Yes	
San Buenaventura	10	1 per school	2		3	1	4		Yes	
San Diego	79	1 per school	2	Foreign Lang. as first						Yes
San Francisco	95	App. 1 for ea. in a general pool			1	4	3	2	Yes	
San Gabriel	7	1 per school		1	2				Yes, definitely	
San Jose	25	3 only	Not enough use to say						Did not indicate	
San Leandro	11	1 per school	1	2	4	3			Yes	
San Luis Obispo	7	1 for speech teacher		None						If developed
San Mateo	20	1 for every 5 sch.		1	Science listed 2nd				Yes	
San Rafael	10	1 for every 2 sch.		1	2	3			Yes	
Santa Ana	22	1 for every 2 sch.	3	1		2	4		Yes	
Santa Barbara	11	5 at center off.	Did not indicate						Yes	
Santa Clara	5	1			1			2	Yes	
Santa Cruz	7	Did not indicate			1				In some fields	
Santa Maria	7	2 only		3	1	2			Yes	
Santa Monica	12	1 per school	1	2			3		Yes	

TABLE I (continued)

Name of School System	No. of Schools in System	Number of Recorders in System	Subjects in which Recorder is used. The number indicates the place of importance.						Has the Recorder been effective in your system?
			Reading	Language Arts	Music	Speech	Soc. Studies	Dramatics	
Santa Rosa	9	2 only--1 for speech	3	2	1	4			Yes
South Pasadena	4	1 per school	1	3	4				Yes
Stockton	29	1 per school	1	3	2				Yes
Sunnyvale	8	1 per school and 1 for speech teach.	3	2	1	4			Yes
Taft	6	1 for every 2 sch.		1	3			2	Yes
Torrance	20	1 per school	1	2	3				Yes
Tulare	8	3 only		2			1		Just getting started
Vallejo	18	1 per school		2	1	3	4		Yes
Visalia	12	1 per 2 schools	1	4	3	2			Yes
Vista	3	2 per schools				1			Yes
Watsonville	6	2, 1 for speech		3	1	2			Yes
Whittier	15	1 per 2 schools		3	4	1	2		Yes

Eight major questions were asked on the survey pertaining to the uses of the tape recorder in each system. The questions are taken one at a time. The results are the following:

"How many tape recorders do you have in your system?"

Forty-five schools, or 52 per cent, indicated they had one recorder for each school in their system. It was found that over 35 per cent of those forty-five with one recorder per school were in systems that had over ten schools. This would indicate the larger the system the less chance of having one machine per school.

"What type of recorder do you have?"

Track. Fifty systems indicated they had double track. Fifteen said they had single track. Thirteen had both single and double track; eight did not indicate on the survey. It may be concluded that the majority of systems have double track.

Speed. Fifty-one systems had two speeds ($7\frac{1}{2}$ and $3\frac{3}{4}$). Twelve had three speeds ($7\frac{1}{2}$, $3\frac{3}{4}$, and $1\frac{7}{8}$). One had a single speed ($7\frac{1}{2}$), and one system did not indicate. One system did not have a tape recorder in the elementary schools. A conclusion can be drawn here that the majority of systems have the two speed tape recorders.

"In what subjects are your recorders used?"

The following subjects were listed: reading, language arts, music, speech, foreign language, social studies, dramatics, arithmetic, and science. The following question was asked: "In what subject from the above list was the tape recorder used most?" Music was listed as first; speech, second; language arts, third; reading, fourth; social studies, fifth.

"How are most of your finished tapes obtained?"

The majority of the school systems reported that they recorded their own programs at individual schools. Some school systems received tapes from the Central Office which had been taped from a master tape furnished by the radio station.

"If you record your own tapes, from what source are most of them obtained?"

The majority of the school systems obtained recordings from their own classrooms. Some tapes were furnished by the Central Office. Two school systems had previously received from the local radio station. The music and speech supervisor also taped some material for their lessons.

"Do you have your own duplicating service?"

Twenty-two schools indicated they had some kind of service for duplicating tapes. This was done

primarily at the administrative offices by those who use the service.

"Has the use of the tape recorder been effective in your school system?"

Sixty-two of the school systems answered "yes" to this question; nine said "moderately"; two stated "no"; and thirteen did not indicate. A conclusion can be drawn here that a good majority of those questioned said they believed the tape recorder had improved their educational program.

"Do you have some kind of in-service training in the uses of the tape recorder in your school system?"

The majority of the school systems answered the question about "in-service" training to this extent; there is some kind of "in-service" going on in the system, but it is done primarily by the building principal or some person in the building assigned to audio-visual equipment. Very little has been done at the administration building although there were indications of a great need for it.

Conclusions based on an analysis of data of the questionnaires. The investigation, through the use of the questionnaire sent to all city schools in California brought out these facts:

1. Most school administrators believed the tape recorder had been a valuable addition to the audio-visual equipment and to the educational program as a whole.

2. Many systems would like to have a minimum of one tape recorder per school.

3. Most administrators in systems without one per school agreed the tape recorder is a desirable addition to their system; but, in general, lack of funds prevented placing one per school.

4. Many audio-visual directors said their in-service training program was not adequate. Most of them have plans to increase their training program in the future. Those having in-service training indicate that this training is primarily on how to operate the equipment rather than on teaching procedures.

5. Three primary sources for in-service training are: (1) building principal, (2) master teachers in building, and (3) the commercial representative who sells the machine.

6. Several school systems which are near colleges or universities encourage their teachers to take courses in the use of the tape recorder.

7. One audio-visual director stated that there are two things retarding the progress of the tape recorder in his system. (1) Teachers were afraid of the mechanism of

the machine, and (2) some teachers were too busy teaching the "3 R's" to be bothered with this "new" idea.

8. An interesting comparison was made between the two largest systems in the survey. Los Angeles has four hundred elementary schools with one recorder per school. San Francisco has one hundred elementary schools and approximately eighty recorders available for the elementary schools. These machines are in a general pool. Dr. W. B. Sanborn, Supervisor of Audio-Visual Education, stated there is a tremendous demand and interest in the tape field in San Francisco; however, they lack sufficient funds to cover all requests.¹

San Jose, with twenty-five elementary schools, also indicated each high school had a recorder, but there were only three for the elementary schools. Miss Zingheim, Supervisor of Instructional Material, indicated they hoped to have one per elementary school in the near future.² The experimental period in the elementary schools is nearly complete.

¹Questionnaire to the investigator from Dr. W. B. Sanborn, Supervisor of Audio-Visual Education, San Francisco City Schools, San Francisco, California, November 15, 1956.

²Questionnaire to the investigator from Miss Zingheim, Supervisor of Instructional Material, San Jose City Schools, San Jose, California, November, 1956.

9. The majority of schools do not have a duplicating service. If the service is available it is usually done at the Central Office. Several audio-visual directors stated they received master tapes from the radio stations in their area.

10. This investigator feels there was great interest shown in the tape recorder as indicated by the immediate return of 70 per cent of the questionnaires sent. The remaining 20 per cent were returned within a month after the follow-up letter was sent.

Chapter IV contains information received from personal interviews from audio-visual coordinators from Merced, San Joaquin, and Tuolumne Counties and independent city districts such as Lodi, Keyes, and Turlock. The purpose of the chapter is to make a comparison of what is being done in schools near Modesto.

CHAPTER IV

WHAT IS BEING DONE IN THE CITY AND COUNTY SYSTEMS NEAR MODESTO

I. HOW DATA WERE COLLECTED

After collecting data through the questionnaire it was decided another approach to the study would be to conduct personal interviews with the counties adjoining Stanislaus County. This plan was approved by the thesis committee. The audio-visual directors from Merced, San Joaquin, and Tuolumne Counties were interviewed. Harold Francis, Audio-Visual Director of Stanislaus County, was also contacted in order to make a comparison. Small city schools, who are independent districts within the county framework, were also interviewed. These cities were: Lodi, Keyes, Oakdale, and Turlock.

A typewritten personal letter was sent to each audio-visual director, asking for an interview. A checklist was devised as an aid to have uniformity in the information gathered. A copy of the letter of request for an interview and the checklist can be found in the Appendix, pages 87-89.

II. RESULTS OF THE INTERVIEWS

This section contains two parts. The first part consists of information gathered from audio-visual directors from nearby counties, and the second part contains information gathered from nearby cities.

Counties

Stanislaus County Schools. Harold Francis, Coordinator of Instructional Materials, was interviewed on March 22, 1957. Here are the pertinent facts found in Stanislaus County in regard to the use of the tape recorder.

1. There were forty school districts in the county.
2. Twenty-five districts had tape recorders.
3. The district paid for the majority of the recorders. Some were purchased by parent groups, however.
4. The brand name of the machines used were: Ekotape, Webcor, and Ampro. All were double track with speeds of 7 1/2 and 3 3/4 inches per second.
5. Francis said music was the first use, language arts the second, and social studies third. However, he indicated the tape recorder was not used as effectively in these three subjects as it could be used in the future.
6. In general, the radio was not used to tape programs for future use.

7. A dubbing service was available in the Central Office, but not used extensively.

8. Stanislaus County does not have a tape library.

9. The interviewee did not feel that more recorders would be effective until an adequate tape library was established.

10. Three services were available for in-service training. These services were: training in nearby colleges, workshops, and demonstrations by county consultants.

11. He was sure the recorder could be made more effective in the future.

12. His plans for the future include such things as increasing the number of recorders in his system, establishing an adequate tape library and expanding his in-service training program. Mr. Francis felt that other equipment such as projectors, phonographs, and other instructional aids should be met before additional machines are purchased.¹

¹Interview between the investigator and Harold Francis, Coordinator of Instructional Materials of Stanislaus County Schools, at Modesto, March 22, 1957.

Merced County Schools. Miss Fay Dyer, Coordinator of Instruction Materials, was interviewed on March 26, 1957. The most important findings to come out of this interview were:

1. There were twenty-eight districts in the Merced County School System.

2. Sixteen tape recorders were listed on the inventory sheet of May, 1956. Two additional recorders were at Central Office.

3. The majority of recorders were obtained from district funds. Two or three were purchased by parent groups.

4. Ekotape, Ampro, Webcor, and Pentron were the types of recorders in the schools.

5. Music was listed as first use of the tape recorder, speech as second, and language arts as third.

6. Radio programs were not taped for future use as a general practice. Future plans call for the radio station to furnish master tapes for circulation within the system.

7. Merced County does not have a tape library. Miss Dyer felt it was not practical until tape recorders become more standardized. She liked the idea of saving tapes until their use was exhausted and then re-using them for other programs.

8. She would like to have more recorders after they have become standardized. She intends to "push" the program more in the future.

9. The in-service training program consists primarily of one person in each building being trained in all audio-visual equipment.

10. In answer to the question about the tape recorder being effective in her system she said,

Yes, it has definitely been effective considering the time the department has been in operation and the need for other equipment such as movie and slide projectors.

11. Her future plans in the department are (1) to have a recorder for each school, and (2) to create a tape library. The Sacramento Bee will furnish master tapes of all their school broadcast programs.²

San Joaquin County Schools. Gordon Wells, Consultant of Audio-Visual Services, was interviewed on March 29, 1957. The most helpful information gathered from Wells was:

1. There were sixty-eight districts, consisting of seventy-five schools, in San Joaquin County. Last Spring (1956) the inventory sheet listed nineteen tape recorders

²Interview between the investigator and Fay Dyer, Coordinator of Instruction Materials of Merced County Schools, at Merced, March 26, 1957.

in the system. Four recorders were in the Central Office for general circulation.

2. Webster Electric, Ekotape, and Webster Chicago are the names of the recorders. All are two speed with about one-half single track and one-half double track.

3. Walls stated the first use of the tape recorder was in social studies, the second use was music, and the third was language arts.

4. The districts purchased all recorders.

5. About 50 per cent of the schools used the school radio broadcast in conjunction with their taping program. The Sacramento Bee sends the master tapes to the county office and they are sent to various schools on request.

6. A tape library has been started. It consists mainly of the school broadcast programs such as "KBEE Goes To School" and the "Standard Broadcast."

7. When asked if the system could use more recorders, he said that he would like to have more for the schools, but he felt some other audio-visual equipment was needed more and the recorders could come after the other needs are met.

8. The type of in-service training so far is for a consultant to go out, upon a district administrator's request, and demonstrate the use of the tape recorder to the teachers.

9. He stated the recorder had been effective primarily in music and reading. He gave an example of its use in music. The districts have a combined Spring Festival each year. The songs to be sung were taped by a group of teachers and sent to various schools in order to let the children practice. In some instances Wells dubbed a tape and left it with a school for their own library if they had a recorder. When the children are finally brought together they all know the songs to be sung.

10. Wells was very enthusiastic about the future of the tape recorder and hopes to continue to expand his program.³

Tuolumne County Schools. Joe Marx, Consultant of Audio-Visual and Special Services, was interviewed on April 12, 1957. The most pertinent information to come out of this interview was as follows:

1. Twenty-two districts were represented in the survey.

2. There were five tape recorders in the system: one Crecent, one Ekotape, one Pentron, and two Webcors. One Crecent and one Recordio were also available for the staff

³Interview between the investigator and Gordon Wells, Consultant of Audio-Visual Services of San Joaquin County Schools, at Stockton, March 29, 1957.

at Central Office.

3. There were both double and single track machines in the system.

4. Social studies was listed as first, language arts second, and music as third when asked what subjects were used most in the taping programs.

5. The radio was not used in the taping program.

6. No formal library had been established; however, several tapes were available in the Central Office for those who requested them.

7. Marx was very enthusiastic about the uses of the tape recorder. He recommends one recorder for each school room.

8. In-service training is, in general, personal demonstration by the audio-visual consultant. Teachers also show other teachers how to run the machines.

9. The answer to the question, "Has the tape recorder been effective in your system," was of this nature. There were many uses in the Tuolumne system that are different from other systems in which this investigator had the opportunity to visit.

Community-slide-tape program. Due to the historical importance of the area in which the Tuolumne system is located, Marx is promoting a slide-tape program. He took

pictures on a thirty-five millimeter camera of Highway 120 (Gateway to Yosemite) and had children narrate on tape. The slide and film are shown together. He brought the community and the school together with this type of program.

One school was in the Miwuk Indian Reservation and he was instrumental in bringing the old chief of the tribe into the school to relate the cultural background of the area. One Indian woman, an expert on basket weaving, was also used in this experiment. These activities were all integrated into the slide-tape program with the children being used as narrators.

One-room schoolhouse. Another unique use Marx made of the tape recorder was to bring programs to the one-room school. He taped a program from one school and shared it with another. A teacher of one school played music on the piano, and it was used in another school which was without a piano. The state textbook Folk Songs of the United States was utilized much more effectively this way.

Weekly radio programs. Marx presented a weekly radio program in which children always participated. The recorder was utilized several ways in this program. First, the children practiced and evaluated on the recorder before

the program. Second, the program was taped and passed around to the various schools after the original program. He had made suggestions for its use on the radio program. Third, some teachers through his suggestions of uses experimented and found other uses.

Speech correctionist. Having had training in speech correction, Marx found ways of putting this training to work through the use of the tape recorder. The county did not furnish a specialist in speech, so Marx took the recorder into the classroom, recorded the children with the handicap, and played back their voices in order to help them.

10. Marx was very enthusiastic about the future of the tape recorder and believed the surface had only been scratched up to the time of this interview. He fully intends to do everything possible to further promote its use in his district.⁴

⁴Interview between the investigator and Joe Marx, Consultant of Audio-Visual and Special Services of Tuolumne County Schools, at Sonora, April 12, 1957.

Independent Districts Near Modesto

Lodi. James Linn, Assistant Superintendent, was interviewed on March 9, 1957. He stated these facts:

1. There are three recorders in five elementary schools. One recorder is also available for school board use. The machines were purchased by the district.

2. He felt the first choice of use was speech, second was music, and third was reading.

3. The Lodi schools do not make particular use of the school radio broadcast programs; however, the master tapes are available from the county office.

4. There is no tape library in the system, but as stated above, tapes are available from the county office.

5. He intends to extend the in-service training program next year.

6. Linn plans on buying two or three more recorders next year and feels he could use more.

7. When asked how effective the recorder has been in the system, he said:

The recorder had been used very much in the Speech department. The Music department also used it for motivation and it has been used quite extensively in Public Relations.⁵

⁵Interview between the investigator and James Linn, Assistant Superintendent of Lodi Schools, at Lodi, March 9, 1957.

8. The future plans of the district are (1) to get more recorders, (2) to train teachers more in the uses of the tape recorder, and (3) to train children (above the fourth grade) to operate the machine.⁶

Oakdale. Mr. Marrow, teacher and Audio-Visual Director, was interviewed on April 5, 1957. It was found through the interview that:

1. There were three schools in the system with two recorders.

2. Reading was the first use; music, the second; and language arts was third.

3. The radio was not used in taping the school broadcast programs.

4. There was not a tape library in the system.

5. He would like to see at least one recorder each for the two small schools, and two recorders for the one large school.

6. He felt that other audio-visual needs such as movie and slid projectors should be met first before tape recorders are pushed.

7. His in-service training consisted not only of demonstrations to teachers on the operations of the

⁶Ibid.

audio-visual equipment, but also a training program for older boys and girls in its operation and care.

8. He said the tape recorder was effective in his system, especially in reading and music. He would like to extend his remedial reading program more through its use.⁷

Turlock. Mr. Griffeath, Audio-Visual Director, was interviewed on April 10, 1957. The most important findings to come from this interview are:

1. There are six elementary schools in the district. Each school had a recorder.

2. Speech was named as first use, language arts as second, and social studies as third in the uses of the recorder. Mr. Griffeath placed heavy emphasis on the use of the recorder in public relations. Mr. Lee, Superintendent, has a weekly radio program over KTUR and recordings from school activities are played on this program.

3. Turlock was one of the schools which made use of the "inter-com" system. The radio programs are played in the Central Office and relayed to individual rooms over the "inter-com." These programs are also taped by the principal

⁷Interview between the investigator and Mr. Marrow, teacher and Audio-Visual Director of Oakdale Schools, at Oakdale, April 5, 1957.

and used at a more convenient time by some teachers. During Public School Week slides are shown to parent groups with the narration over the tape recorder.

4. Turlock does not have a tape library.

5. Mr. Griffeth states one teacher for each grade level in each school was trained in the uses of all audio-visual equipment. Children are not allowed to operate the equipment.

6. Public relations, speech, and reading are the most effective uses of the tape recorder according to Griffeth. A teacher will let a child read a line and then play back the voice to let the pupil evaluate his own mistakes. The speech specialist has her own tape recorder for speech work.

7. Future plans stated by Griffeth are: (1) train teachers one week before the school year starts in such things as the operation of audio-visual equipment, both in mechanical operation and curriculum uses; and (2) make the equipment more functional and portable. One piece of equipment on a portable stand for each floor is one of his goals.⁸

⁸Interview between the investigator and Mr. Griffeth, Audio-Visual Director of Turlock Schools, at Turlock, April 10, 1957.

Keyes. Mrs. Lura White, Superintendent and Principal, was interviewed on April 5, 1957. These are the pertinent facts from this interview.

1. There was one school in Mrs. White's district and one tape recorder.
2. The name of the recorder was Tape Master, with only 7 1/2 speed and a single track.
3. Primary uses are: music (taping standard broadcast), reading, and language arts.
4. The "Listen Awhile Program" from the Stanislaus County Schools was taped from the office and made available for later use.
5. Keyes does not have a tape library.
6. Mrs. White felt there was no need for another recorder. She stated one was enough for that size school.
7. She described the in-service training in this manner. Demonstrations are put on at staff meetings to acquaint teachers with the uses of the recorder.
8. She said the tape recorder has been very effective in the school.
9. She does not have any future plans at the present for additional uses of the tape recorder.⁹

⁹Interview between the investigator and Mrs. Lura White, Superintendent and Principal of Keyes Elementary School, at Keyes, April 5, 1957.

III. SUMMARY

Counties near Modesto. After compiling the information gathered through the interview method, this investigator came to these general conclusions.

Stanislaus County had more tape recorders per district than the other three adjacent counties. Only one system, San Joaquin County, had started a tape library. All school officials interviewed felt the tape recorder was important to their system. No system was taking advantage of the local school broadcast to any great extent.

It was the opinion of this investigator that the smallest district, Tuolumne, with the most limited facilities, was taking advantage and making the best use of the tape recorder at this time.

Cities near Modesto. One conclusion drawn from the interviews of the city administrators near Modesto was that little is being done with the recorder at this time. In general, the opinions of the administrators were favorable to the recorder as a teaching aid, but they wished to purchase other audio-visual equipment before expending more money on tape recorders.

CHAPTER V

WHAT IS BEING DONE IN MODESTO

This chapter contains information received both in a questionnaire and in an interview with Miss Lovelle C. Downing, Director of Curriculum and Assistant Director of In-service Training (K-6), in the Modesto City Schools. There are three sections in the chapter. The first gives information collected from Miss Downing, the second gives data about the situation in Fremont School, and the third tells about the other schools in the Modesto system.

I. INFORMATION COLLECTED FROM MISS DOWNING

How Data Were Collected

After investigating some of the city school systems of California through the questionnaires and the surrounding cities near Modesto through the interview method, it was necessary to contact the Director of Curriculum of the Modesto City Schools in order to make a comparison.

Miss Downing was interviewed on April 9, 1957. A questionnaire had been previously sent to her.

Results of Data Collected

The following statements are the results of the information gathered from Miss Downing.

1. Modesto had eighteen elementary schools in the system.

2. Eleven schools had recorders which had been purchased by parent groups. There were four available at Central Office for circulation.

3. The majority of machines were double track and speeds of 7 1/2 and 3 3/4 inches per second. There were a variety of makes such as Ampco, Webcor, Bell, Revere, Philco, and Ekotape. This variation caused the machines not to be used as much as they would have been had they been standardized. This investigator and Miss Downing concurred that lack of standardization was due to the machines being purchased by parent groups without uniform standards set up for the schools.

4. Music was listed as the first use made of the recorder, language arts second, and social studies was third.

5. The new tape supply was provided by both the parent groups and the district.

6. There was no organized tape library; however, some tapes are saved and are available upon request.

7. The Music Supervisor was doing a great deal of taping for individual school libraries.

8. Miss Downing indicated the tape recording program was growing and was becoming more effective in music and public relations. Mrs. Lawler, Music Supervisor, was taping songs for non-singing teachers. The Association of American University Women ran a series of tape programs of children's activities in the classroom. The programs were tapes in the classrooms and broadcast by the local radio station.

9. Miss Downing would like to have more recorders in the system. Several parent groups had indicated a desire to place recorders in those schools without them.

10. Her comment on plans for the future was the need for a more effective in-service training program in the mechanical operation of the machine and greater enrichment of the educational program through the uses of the tape recorder.

II. THE SITUATION IN FREMONT SCHOOL

This school was very fortunate in having a Dad's Club which was willing to purchase, not only one recorder, but two when the need was in evidence.

The principal, Lester Tooker, was very instrumental in the progress of the program. This investigator believes that Mr. Tooker's enthusiasm, more than any other factor, was responsible for the success of the program.

This investigator was a teacher and assistant to the principal in Fremont School and much of the information given was through personal experience.

Purchase

Fremont School started its taping program in about the same manner many other schools had done. In November of 1955 the Dad's Club suggested buying a gift for the school. After several considerations a tape recorder was suggested. The only previous way of using a recorder was by checking out from Central Office. This was time-consuming and only a very few teachers had bothered to do so.

Several recorders were demonstrated and a Bell tape recorder was purchased. One primary feature that sold the faculty was the three speeds. In the use of the machine it was found there was very little use for the extra speed of $1 \frac{7}{8}$ inches per second.

From the beginning the recorder was in great demand; first through curiosity and then as teachers began experi-

menting and finding new uses for it. By the end of the 1955-56 school year the recorder was in such demand that it was evident that one recorder was not enough for twenty-two teachers. Near the beginning of the 1956-1957 school year the Dad's Club purchased a new Webcor combination radio and tape recorder. This combination radio-tape recorder was requested because of the emphasis placed on taping the school broadcast programs.

Library

At first tapes were stored within the recorders or in various teachers' desks and passed around. This soon became a problem as the Dad's Club and P.T.A. purchased additional tapes, and some teachers requested that certain tapes be kept for future use. A plan for cataloging the tapes was essential if the proper utilization of the tapes was to be expected.

Carts for portability. The principal, three men faculty members, and the custodian made a portable stand for the first recorder purchased so that it could be moved from room to room with ease. This first cart was a simple one built only for the purpose of carrying the heavy machine around. It was soon found necessary to devise some type of indexing so tapes could be made avail-

able to teachers upon very short notice. Plans were devised to build drawers in the stand so that tapes could be indexed properly and found immediately.

Indexing. After recognizing the need for indexing the tapes, a Dad's Club member constructed a large portable stand which would hold approximately two hundred three-inch tapes. A loose-leaf binder was placed in the top drawer with the name of the songs or programs and a corresponding number was put on the tape. The tapes were dropped in slots which were also numbered. No particular attention was placed on alphabetical order. Each tape was numbered as it was produced and was listed in the loose-leaf catalog. This method proved successful.

After the Webcor was purchased a need developed for the second stand. Experiences from the first stand, which was found to be too large and too clumsy, were put to good use in planning for two new stands. The new stands were lighter and easier to wheel from room to room. A large bottom drawer was added to store booklets containing words to various taped songs.

One recorder was designated for grades one, two, and three and had tapes and material in the drawers for those grade levels. The other recorder was for grades four, five, and six with appropriate tapes and materials. Each stand

had an indexing catalog. Tapes from the school radio broadcasts were kept in the upper grades' stand. The teachers instructed children in their rooms how to find a tape from the other stand if the occasion arose.

Calendar. It was soon found that several teachers planned on using the recorders at the same time. A workable calendar had been used for some time in regards to other audio-visual equipment. The original calendar was used with the addition of two columns for the tape recorders.

At the time of this writing there are problems still to be worked out in order to keep a smooth running program, but it is felt by this investigator that much had been accomplished up to this point and more will be done as the program expands.

Ways of Getting Usable Material for Tapes

Teachers who had a good singing voice taped some tapes for other teachers who could not sing well. A detailed lesson plan accompanied the tape. Much use was made of this method in Fremont School.

Radio programs were utilized to a great extent. Such programs as Stanislaus County's "Listen Awhile," "KBEE Goes to School" and "The Standard Broadcast" were

taped daily and made available for the teachers for one week. A system was devised to have the tapes in the drawers of the portable stands in sections to correspond with the days of the week. The same tape was used each week, thus every tape could be heard by a teacher from the time it was taped until a week later when a new program was copied.

Mrs. Frances Lawler, Music Supervisor of Modesto City Schools, also taped many songs to be played by teachers who were not trained in music. Daily lesson plans also accompanied her tapes. One type of song enjoyed by both the children and teachers was a series of folk songs and American Heritage songs. A tape accompanied by lesson plans on music fundamentals was also produced.

In-service Training

Throughout this investigation evidences of the lack of in-service training in the uses of the tape recorder are apparent. It was found at Fremont School that it was useless to start a tape program unless the teachers were adequately trained in both the mechanical operation of the machine, and also the educational values. At several faculty meetings a portion of the time was devoted to showing teachers how to operate the machine. The building audio-visual representative (in this case the investigator) had given personal demonstrations on the operation of the

machine. Boys and girls from the fourth, fifth, and sixth grades were also trained in the operation of the recorder.

Teachers were reminded frequently at faculty meetings and in the daily bulletin to return the equipment promptly in order not to upset some other teacher's plan.

Interviews with Fremont School Classroom Teachers

This section will tell what individual teachers in Fremont School have been doing the past eighteen months.

Fremont has twenty-two teachers. There are two kindergartens, three first grades, three and one-half second grades, three and one-half third grades, three and one-half fourth grades, three and one-half fifth grades, and three sixth grades in the school. An attempt was made to get a representative from each grade level to state how the tape recorder has been used in her program.

Miss Grace Gray, kindergarten teacher, was interviewed and said that she recorded a talk she had made before a parent group one evening during the time the school was interpreting a program called "Know Your School Week." The coordinator from the primary level felt that Miss Gray's presentation was so well done that she requested a copy of the tape to play to new kindergarten teachers.¹

¹Interview between the investigator and Grace Gray, kindergarten teacher at Fremont School, Modesto, dated May 3, 1957.

Mrs. Mary Chick, first-grade teacher, gave this information. She said she made many uses of the tape recorder. Her class listens to "KBEE Goes to School" and the "Listen Awhile" programs. She feels her language arts program has been improved by the use of the tape recorder. The children draw pictures suggested by the stories told, and make up their own stories similar to the taped program. Sometimes the program fits her social studies unit, and is used either to introduce the unit or to culminate it. Her children often dramatize the story they have just heard. She encourages them to parade with the music and to play rhythm instruments in time with the recording. She also states they listen to the program sometimes just for relaxation and enjoyment after coming in from noon hour or recess. She was an enthusiastic supporter of the tape recorder.²

Mrs. Vina Williams, second and third combination grade teacher, was able to teach her own music and did not depend upon the recorder for this purpose. She said that her children enjoyed listening to the programs taped from

²Interview between the investigator and Mary Chick, first grade teacher at Fremont School, Modesto, May 3, 1957.

the weekly radio programs. They also enjoyed listening to the recording of their own voices in reading.³

Mrs. Craig, third grade teacher, said that she had no music ability and it was not until the tape recorder was made available to her room that she felt her children were given an equal chance in music. She now feels she is successfully teaching many songs from the tapes which other teachers have recorded. Mrs. Craig reported that it had been impossible for her to teach new songs to her class before the tape recorder was made available to her.⁴

Mrs. Mariel Sather, fourth grade teacher, used the tape recorder in several subjects; however, her greatest use was with the Standard Broadcast. Mrs. Sather wrote the following report:

I have used the tape recorder in several different phases of instruction.

The Standard School Broadcast is heard by my class once a week. I introduce the program to the children through the use of the teacher's guide which is available to all instructors in our profession. I usually place the selections on the board which we will hear. Instructions are given to the children as to what particular activity we will do. I do not feel that fourth graders are capable of just sitting still and listening for a half hour unless the program contains

³Interview between the investigator and Vina Williams, second and third combination grade teacher at Fremont School, Modesto, May 3, 1957.

⁴Interview between the investigator and Louise Craig, third grade teacher at Fremont School, Modesto, May 3, 1957.

songs which are very familiar to them and then they are welcome to sing along ("Man Without A Country" was the one exception so far this year). Activities are varied in my classroom during this particular time in which we enjoy the program. Many times we improve our listening by taking notes of the most important parts. Many times we listen for moods and illustrate the feelings or moods by the use of colors. Art is many times a pleasant experience derived from listening. An appreciation of finer music is also attributed to their listening, since so many do not receive this rich experience at home.

Another use which we apply to the tape recorder in fourth grade is the singing with tapes and song sheets provided. Our social studies units are many times enriched through the use of tapes made by our music coordinator, Mrs. Frances Lawler, for songs which go with each particular unit of study.

Speaking, programs, voice quality, and many other things which help with individual improvement and development are made possible through our tape recorder program.⁵

Carl Orndoff, fifth grade teacher, said he used the tape recorder in his reading program. He felt it was helpful to his class. He would let the children read orally and then play it back for evaluation. He stated that a child corrected his stumbling, hesitant reading habits after he had heard his own voice over the recorder. Orndoff felt the tape recorder has helped his reading program in this manner.⁶

⁵Interview between the investigator and Muriel Sather, fourth grade teacher at Fremont School, Modesto, May 3, 1957.

⁶Interview between the investigator and Carl Orndoff, fifth grade teacher at Fremont School, Modesto, May 3, 1957.

Glenn Delaplane, sixth grade teacher, gave his opinion on the uses of the tape recorder. He reported he used it in teaching music, science, spelling, and social studies (Standard Broadcast). He said he is not particularly trained in music and felt it was a help to him in introducing new songs.

He used the recorder to some extent in his science experiments. He records the voice part of his experiment or what he is going to do in advance, then he carries on the demonstration while the recorder gives the explanation.

Delaplane felt his oral spelling program was improved by letting the children spell the word and then listen to the playback and evaluate. If the child spells the word incorrectly he can hear his mistake. If he spells the word correctly he can be critical of his enunciation.

He also used such programs as the "Standard Broadcast," "Down Science Way," and "Our World Today." These programs are taped each week.⁷

Jack Wier, sixth grade teacher, gave a different use for the tape recorder. He felt it definitely helped children get over "mike fright." After practicing before

⁷Interview between the investigator and Glenn Delaplane, sixth grade teacher at Fremont School, Modesto, May 3, 1957.

the microphone the boys and girls are more confident in speaking before an audience. He also felt the use of the recorder was helpful in training pupils to be good listeners.

Wier dramatized a flying trip to South America and taped it so the class could play back and evaluate. He kept the tape a few days to play for coordinators, the principal, or for any parent who would like to hear what part his child had had in the program.⁸

After interviewing these seven teachers in the Fremont School this investigator came to these conclusions:

1. All teachers interviewed felt the tape recorder had been effective in the school.

2. Three teachers, Mrs. Sather, Mrs. Craig, and Mrs. Chick used the machine each week consistently.

3. Mrs. Craig expressed her belief that the tape recorder had done more for her program than any other audio-visual equipment with the possible exception of the film projector.

4. Each teacher wished to see the tape recording program extended in the future beyond what it is at the present time.

⁸Interview between the investigator and Jack Wier, sixth grade teacher at Fremont School, Modesto, May 3, 1957.

III. OTHER MODESTO SCHOOLS

The following information was gathered through personal interviews and telephone calls with principals of the schools in the Modesto City System. There were eleven schools in the Modesto City System that had tape recorders purchased by the P.T.A. or Dad's Club. The schools having tape recorders were: Beard, Fremont, Garrison, Enslin, Sutter, El Vista, Lincoln, Wilson, Orville Wright, Bret Harte, and Washington. Those schools not having a recorder were: John Muir, Tuolumne, Fairview, Shackelford, Burbank, and Franklin. There were a variety of makes such as Ampco, Webcor, Revere, Philco, and Ekotape.

No school had an organized tape library. The uses of the recorder mentioned by those interviewed over the telephone were said to be in music, reading, social studies, and language arts. Several stated the machine was used to interpret the arithmetic and language arts program to the parents at P.T.A. meetings.

The following conclusions can be drawn after investigating the uses made of the tape recorder by the schools other than Fremont in the Modesto City System:

1. Most schools do not use the recorder to any great extent.

2. No school had a tape library.

3. Most administrators surveyed agreed that the uses of the recorder were many, but they had not had enough time to make use of it. Most of them plan to use it more in the future.

Conclusions Based on Data Gathered from the Modesto City School System

Chapter V can be summarized with these few conclusions:

1. All recorders were purchased by parent groups with the exception of the four at Central Office. This has resulted in a lack of standardization of recorders.

2. Fremont School, up to the time this report was written, was the only school to have an organized tape recorder program.

3. Fremont School was the only school with an organized tape library.

4. Fremont School was the only school to take advantage of the three school radio broadcast programs.

5. The Modesto City School System does not have an in-service training program.

6. Modesto classed music as first choice, language arts as second, and social studies as third.

The following is what this investigator feels are the strong points of the Modesto City System in regard to

the uses of the tape recorder.

Strong points. There was evidence of increased interest in the tape recorder by the administrators in the system. The parent groups were aware of the need and are making generous contributions to the program and new teachers coming into the system showed willingness to make use of their college training in uses of the tape recorder.

Weak points. This investigator believes that the major weakness of the Modesto City System in regard to the uses of the tape recorder is the fact that the System had not yet allocated money for at least one recorder per school, and there was no organized in-service training in the uses of the tape recorder at the time of this study.

CHAPTER VI

SUMMARY, CONCLUSIONS, AND RECOMMENDATIONS

I. SUMMARY

It was necessary to have a method of attack when this study was begun. In order to find out what other California schools were doing concerning uses of the tape recorders, this investigator decided to (1) read all available literature possible on the subject; (2) send questionnaires to all unified city schools in California; (3) interview the audio-visual directors of schools near Modesto; and (4) investigate what was happening in the Modesto City Schools.

The first phase of the study was the survey of the literature; the second part was obtaining names of the audio-visual directors of city schools and sending them a questionnaire. Ninety-five questionnaires were sent and eighty-six were returned. The third part of the study began with the personal interviews with the audio-visual directors of the nearby towns. These interviews were obtained by writing a personal letter of request first. The last part of the study was conducted by reporting on what had been done in this investigator's own school, which was in the Modesto City Schools, and by questioning administrators

from other schools in the System.

II. CONCLUSIONS

The purpose of this section is to show the conclusions drawn by this investigator through the literature, analysis of the questionnaires, and through personal interviews in the counties and cities included in this study. The strong points of the tape recorder are pointed out in this section. The weak points are also covered.

General conclusions drawn from readings, questionnaires, and interviews.

1. The literature shows there has been extensive use of the tape recorder by broadcasting companies, recording companies, educators, and the public in general. The interviews and questionnaires used in this study show that in California, educators have made use of the recorder in the subjects of reading, speech, music, language arts, science, social studies, and arithmetic. Music was the first use of the recorder in the California Schools, with speech second, and language arts third.

2. The tape recorder has been in use only since World War II in America and thus can still be considered in the experimental stage at the time of this report. As a result very little literature was available in textbooks,

but a great many articles have been written for periodicals and commercial publications.

3. There was high interest in the tape recorder by school administrators. Many schools were in the experimental phase of its uses at the time of this study. Many of these experiments were on the trial and error basis.

4. Some State Departments of Education sponsor a "Tapes for Teaching" service. California, at the present writing, is not one of the states providing this service. Most of the schools tape their own programs rather than obtaining them from other sources; only 25 per cent of the schools had duplicating service.

5. Fifty-two per cent of the schools surveyed had one recorder per school. Forty-six per cent stated it was their goal to have one per school.

6. There was a great need for in-service training in the uses of the tape recorder both in mechanical operation and in subject matter.

7. The tape recorder has been judged to be effective in most of the schools surveyed.

Conclusions drawn from the study of the Modesto City System through the questionnaire and interviews.

1. Modesto compared with the majority of city schools surveyed by classing music as first choice. Modesto used

language arts as second, while the majority of other city schools stated speech as second. Modesto classed social studies as third, while the city schools surveyed mentioned language arts.

Speech appeared more times as first on the survey by the cities near Modesto; music was second, and language arts was third.

2. There was high interest in the tape recorder by school administrators interviewed. One stated that she had not had the machine long enough to make a statement, but was in the experimental stage.

3. Modesto did not have a duplicating service. Fremont School performed a duplicating service for the music coordinator. This school was the only one with two recorders, thus making this service possible.

4. Sixty-two per cent of the Modesto City Schools had one recorder per school. This was higher than the 52 per cent of other schools in California.

5. The Modesto City School System does not have an in-service training program although some interviewees felt the need for it.

6. Modesto compared with the majority of schools in

both the questionnaire and the interview by not having a tape library. California is one state that does not have a "Tapes for Teaching" service. Until the time comes when this service is established, this investigator feels that many systems will not take the tape recorder seriously.

7. There was a lack of standardization of the tape recorders in the Modesto schools. This variation was due to parent groups purchasing the equipment.

8. Fremont School was the only school in the system with an organized tape program.

Strong points. The increased interest shown by many teachers and administrators is encouraging the development of the tape recorder program. Teachers are sharing ideas with other teachers. Administrators are beginning to see the educational value of the recorder and are making recommendations to their Boards to purchase them.

Several State Departments of Education and other agencies are making their tapes available at a very nominal fee. These programs are produced by experts in the subjects and are beneficial to administrators, teachers, and parent groups.

A new National Tape Recording Catalog has been

released by the Department of Audio-Visual Instruction, National Education Association, listing many programs available through the National Repository, Audio-Visual Center, Kent State University, Kent, Ohio.

The tape recorder is simple to operate, and children from the fourth grade upward can easily be trained in its operation, thus relieving the busy teacher.

The investigator believed the following were the weak points of the tape recording program at the time of this study:

Weak points. An effective taping program cannot be run unless proper equipment is supplied. Not all schools at the present time have enough tape recorders. Many administrators say this is not feasible; more recorders cannot be purchased until after other equipment is purchased.

The lack of a tape library is also a factor that will hamper an effective taping program. After the recorder is purchased some means for purchasing needed tape and some way of indexing and storing the finished tapes must be devised.

The weight of the tape recorder at the present time is a disadvantage. If a successful program is to

be carried out, the administrator or person in charge of the program must create some way of making the recorder available at the time the teacher wants it. This must be done with some convenient type of portable stand and a workable calendar for the teachers to reserve the recorder at the time it is to be used.

When this study was made there was a decided lack of in-service training in both the mechanical operation and the uses of the recorder in the curriculum. To make a more effective program an in-service training program must be implemented. Some administrators indicated this will happen as soon as more recorders are obtained.

III. RECOMMENDATIONS

After reading the literature in the field, after studying the results obtained through the questionnaires which were sent to the city schools of California, and after personal interviews with administrators of nearby counties and cities, this investigator makes the following recommendations for the Modesto City School System:

1. Each school should have a minimum of one recorder. Large schools should have two or more. Tapes should be purchased from district funds in the same manner as other instructional materials.

2. There should be some standardization of recorders in a system. An advisory board should set up specifications as guides for administrators and parent groups when considering the purchase of a tape recorder.

3. An adequate in-service training program for the use of the tape recorder established in each system both in the mechanical operation and in the educational field should be developed.

4. Tapes should be available to all schools through a central library. This could be an extended service of the audio-visual departments in the various county and city systems and controlled in the same manner as films are distributed in many schools at the time of this investigation.

5. A future study should be made of the tape recorder's use in the curriculum as more recorders become available to the schools. Studies should be made of its use in reading, music, language arts, social studies, speech, arithmetic, science, and other subjects.

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APPENDIX

QUESTIONNAIRE ON USES OF THE TAPE RECORDER

I am making a survey on the uses of the tape recorder in the Modesto City Elementary Schools and those of other unified city schools in California. It would be a tremendous help if you could check these questions. I will be happy to send you the results of the study if you so desire. Thank you.

1. Name of School _____ City _____

2. Number of elementary schools in system? _____

3. How many tape recorders do you have in your system?

- ☐ a. One per school ☐ c. One for every 5
☐ b. One for every 2 schools ☐ schools
☐ d. Added comment _____

4. What type of recorder do you have?

Track

Speed

☐ Double track
☐ Single track

☐ 7 1/2 - 3 3/4
☐ 7 1/2 - 3 3/4 - 1 7/8

5. In what subjects are your recorders used?

<input type="checkbox"/> Reading	<input type="checkbox"/> Speech	<input type="checkbox"/> Dramatics
<input type="checkbox"/> Language Arts	<input type="checkbox"/> Foreign Language	<input type="checkbox"/> Arithmetic
<input type="checkbox"/> Music	<input type="checkbox"/> Social Studies	<input type="checkbox"/> Science
<input type="checkbox"/> Others		

6. In which of the above subjects are the tape recorders used most in your school?

7. How are most of your finished tapes obtained?

- | | |
|--|--|
| <input type="checkbox"/> a. Record your own | <input type="checkbox"/> d. From individual |
| <input type="checkbox"/> b. Send empty tape to have | <input type="checkbox"/> school file |
| <input type="checkbox"/> dubbed from a master tape | <input type="checkbox"/> e. Rent from out of |
| <input type="checkbox"/> c. From central office file | <input type="checkbox"/> town source |
| | <input type="checkbox"/> f. Other sources |

8. If you record your own tapes, from what source are most of them obtained?

- | | |
|--|---|
| <input type="checkbox"/> a. Radio | <input type="checkbox"/> e. Local music teacher |
| <input type="checkbox"/> b. T. V. | <input type="checkbox"/> f. Music supervisor |
| <input type="checkbox"/> c. Programs in classrooms | <input type="checkbox"/> g. Others |
| <input type="checkbox"/> d. Orchestra and bands | |

9. Do you have your own duplicating service? Yes ___ No ___

10. If answer to number 9 is yes, where?

- | |
|--|
| <input type="checkbox"/> Central Office |
| <input type="checkbox"/> Individual schools |
| <input type="checkbox"/> Others |
| <input type="checkbox"/> Information not available |

11. Has the use of the tape recorder been effective in your school system? ___

(Please use reverse side or bottom of page if more room is desirable)

12. Do you have some kind of in-service training in the uses of the tape recorder? Yes ___ No ___. If yes, would you care to elaborate on reverse side?

(Do you wish the results of this study? ___)

Virgle L. Giddens
Fremont School
Modesto, California

Added Comments:

601 Marshall Avenue
Modesto, California
January 1, 1957

Mr. Harold Spears
135 Van Ness Avenue
San Francisco 2, California

Attention: Audio-Visual Department

Dear Sir:

Several weeks ago I sent a questionnaire to your department on the uses of the tape recorder. Perhaps it has been misplaced or otherwise lost.

I feel very happy to have had over 70% returned and am anxious to receive the remaining 30%. Even if your system does not use the tape recorder, it would aid in the tabulation if you would so state on the enclosed form because this will have significance on the over-all picture. I am hoping all this information will determine to what extent the tape recorder is being used in city systems in California at the present time.

Any information you can give on the enclosed questionnaire will certainly be appreciated.

Sincerely,

Virgle L. Giddens
Teacher & Asst. to Principal
John C. Fremont School
Modesto, California

601 Marshall Avenue
Modesto, California
February 11, 1957

Dear Fellow Educator:

Last October I sent you a questionnaire on the Uses of the Tape Recorder. You were kind enough to return yours promptly and indicated you would like to have the results of this survey.

Ninety-five questionnaires were sent to all city schools who had City Superintendents of Schools listed in the Directory of Administrative and Supervisory Personnel of California Public Schools 1955-56. I am happy to report that eighty-six of the questionnaires were returned.

The following are what I considered to be the most pertinent facts to come out of the survey:

1. Forty-five schools, or 52%, have one tape recorder for each school in their system.
2. The higher percentage of these forty-five schools (35%) are in systems that have over ten schools.
3. The answer to the question "In What Subjects Are Your Tape Recorders Used Most" was (1st) Music, (2nd) Speech, (3rd) Language Arts, (4th) Reading, (5th) Social Studies.
4. Fifty-one schools have 2 speed ($7\frac{1}{2}$ and $3\frac{3}{4}$) recorders. Twelve schools have 3 speed ($7\frac{1}{2}$, $3\frac{3}{4}$ and $1\frac{7}{8}$) recorders. One school has 1 speed ($7\frac{1}{2}$) recorder. Twenty-two did not indicate. One elementary school system does not have a tape recorder (only in high school).
5. When asked has the tape recorder been effective in your school, the survey indicated sixty-two yes, nine moderately, two no and thirteen no indication.
6. Twenty-two schools indicated they had some kind of service for duplicating tapes. This is done at their administrative offices by the majority of those with the service.

7. The majority answered the question about "in-service" training to this extent. There is some kind of "in-service" training going on in their system, but it is done primarily by the building principals or some person in the building assigned to A. V. equipment. Very little has been done at the administration building although there were indications of a great need for it.

Thank you again for your cooperation. I hope these results will help you to know what other schools in similar systems are doing.

Sincerely yours,

Virgle L. Giddens
Teacher & Asst. to Principal
John C. Fremont School
Modesto, California

601 Marshall Avenue
Modesto, California
February 23, 1957

Lodi Elementary Schools
Mr. Lawson H. Smith, Superintendent
Lodi, California

Attention: Audio-Visual Director

Dear Sir:

I am working on a Master Thesis comparing the uses of the tape recorder in Modesto with those of other cities in California. It is my intention to make personal calls on schools such as yours.

If possible may I have an interview with you or some member of your staff about this subject? Saturday morning is better for me if you have office hours at that time, but if not I can be at your office any week day between 4:15 and 5:00 o'clock.

I have sent out questionnaires to all city schools in California and have had over 90% returned. I will bring this information to share with you if you so wish.

Hoping to hear from you soon.

Sincerely yours,

Virgie L. Giddens
Teacher & Asst. to Principal
John C. Fremont School
Modesto, California

CHECK SHEET FOR USES OF THE TAPE RECORDER

1. Name of School System Person being Interviewed
- Title
2. Number of elementary schools in system
3. How many tape recorders do you have in your system?
4. How did you obtain your recorders? Parents Group
School Board Other
5. Type of recorder?
Name Speed Track
6. In what subjects are the recorders used? Reading
Speech
Language Arts
Social Studies
Dramatics
Music
Science
Others
7. In which of the above subjects are the recorders used most?
1st choice 2nd choice 3rd choice
8. How do you get your new tape supply? Parents Group
School Board Other
9. Do you tape from radio programs?
Listen Awhile Program
K B E E Goes to School
Standard Broadcast
Others
10. Do you have a tape library?
11. Do you think you could use one or more tape recorders, in addition to what you now have?

12. Describe the type of "in-service" training program used by your system?
13. In what ways has the use of the tape recorder been effective in your system?
14. Describe any plans for the future which should add strength to your total program.