

AN ABSTRACT OF THE THESIS OF

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IN ARIZONA PUBLIC SCHOOLS-----

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Introduction

This thesis is a study of the development of motion-picture usage in Arizona public schools. The study was made with the following purposes in mind:

1. Furnish a historical record for the files of the state Department of Education.
2. Assist in the organization of the state Department of Visual Instruction.
3. Relate to the school teachers and administrators the trend and amount of use by the schools.

Historical Background

After the invention of the motion-picture film in 1889, gradual development took place until actual features were being presented. Educational films had their beginning about the time the world war and were used primarily as a propaganda agent. After the war much enthusiasm was developed for the use of educational films. Many expensive machines were installed. A slump was inevitable, however, for the films were too expensive to produce and transport. In later years 16 millimeter films and equipment were produced, making school use more possible. Film distributing centers were established. At present new film producing companies are doing much to encourage the schools in the use of films.

Five reports were found which were similar in content to this study. The United States Department of Education made two reports, in 1919 and 1936. The first presented a total number of projectors in use by schools of the entire country and listed each town in which schools owned projectors. The second gave the school use of all visual aids, including the number of motion-picture projectors and the number of film

distributing centers. A third report was that made by the state of New York concerning the number of projectors in the state and the number of rented and borrowed films used. The fourth report was of a survey made by the Victor Animatograph Corporation of the use of all visual aids in the schools of the United States. The fifth report was made by the University of Colorado film library which attempted to find whether or not it would be feasible to organize a sound motion picture library for use by the schools in the Rocky Mountains.

Methods of Procedure

Written records, interviews and a questionnaire were the methods used to obtain data for the study. Most of the history of the development was obtained from the film library at the University of Arizona in Tucson. This was supplemented by statements of educators who were interviewed. The questionnaire provided data concerning present motion picture use.

A copy of the questionnaire was sent with a personal letter to 105 public and Indian schools. Eighty-four returned, which was an eighty-one percent reply. The number of projectors reported by the questionnaires was supplemented by lists presented by motion picture equipment dealers of the schools using their particular makes of projectors.

The Findings

As early as 1919 four projectors were reported in the state. The University film library was established the following year of 1920. Its films were borrowed from various sources. Government Indian agencies used films extensively. Slow but gradual increase was reported until 1934. At that time 16 millimeter films replaced the 35 millimeter and the use of films increased rapidly. In 1940 the library served thirty-nine school systems in the state, a total of 283,772 people seeing the films. The University of Colorado film library reported sending 32 percent of its total shipments to Arizona and the Y.M.C.A. had 78 school exhibitors in the state.

There were 103 projectors in use in the state in 1940. Nine schools owned films, none having more than six reels. Fourteen schools used films for instructional use only, one for recreation and entertainment only, and 37 used films for both. School use of films varied from 2 to 300 film subjects, an average of 69 per school and a total of 3049.

Courses of study in order of the number of films used were geography, history, science, safety, social studies, physical education, home economics, industrial arts, agriculture, art, music and English.

The University of Arizona film library was listed first in furnishing films to schools. That library had 525 reels of film. Other libraries in order were University of California, industrials, others, Y.M.C.A., and the University of Colorado.

Appropriations for financing the program were made in 25 cases by Boards of Trustees and in 23 cases from general school funds.

Most enlightening and helpful comments were made by the administrators concerning their attitudes toward the program.

Recommendations

A summary of these comments and of those made by the educators during interviews leads to the following recommendations:

1. The teachers' colleges and state university should offer regular courses in audio-visual aids.
2. The state Department of Education should establish a circulating library or the counties should have county pool libraries.
3. The state department should supply films cheaper, distribute them more quickly from a central location, take good care of films, furnish film guides and handbooks with complete descriptions of films, carry on a testing and research program, provide equipment recommendation service, and distribute type lesson units.
4. County and city school systems should provide supervisors and directors to help teachers administer the program.
5. Administrators should be encouraged to provide appropriations for more equipment, better room facilities and more supervision of the use of motion pictures in classrooms.

A STUDY OF THE DEVELOPMENT OF
MOTION PICTURE USAGE IN
ARIZONA PUBLIC SCHOOLS

by

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A THESIS


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A STUDY OF THE DEVELOPMENT OF MOTION PICTURE USAGE IN ARIZONA PUBLIC SCHOOLS

CHAPTER I

INTRODUCTION

The use of motion pictures as a visual aid in educational institutions has been one of gradual increase over a comparatively short period of years. The production of the first moving picture brought with it enthusiastic dreams of its potential educational values. To some degree, those thoughts have taken shape and have resulted in worthwhile, scientific studies. Today, use of the motion picture has become of high value in helping teachers give to their students a more understandable and dynamic knowledge of the present-day world.

The growth of the use of motion pictures in schools has been aided materially at times by inventions, development of instruments and scientific studies. At times, also, it has been retarded by such things as expensive equipment, unsatisfactory educational films and economic depressions.

This development of school adaptation of the motion picture has been somewhat uniform throughout the United States. After studying the present status of the state of Arizona in this effect, it was evident that a careful survey of motion picture usage in Arizona public schools would be

of definite value.

In making the study the author had the following objectives in mind:

1. To prepare a study which would be of value for the files of the State Department of Education,
2. To furnish a foundation for further organization of the State Department of Visual Instruction,
3. To point out the trends of the program to those administrators in the state who were not using motion pictures in their schools, but who had developed interest in doing so,
4. To help teachers and administrators who were using films to know what others in the state were doing in the field at present.

A great many studies have been made in recent years as to the importance of motion pictures in the lives of children. There were approximately 89,097 motion picture theaters in the world in 1939, according to a survey made by the Motion Picture Division of the United States Bureau of Foreign and Domestic Commerce. Trade estimates showed that the United States had 17,000 cinema theaters, with a seating capacity of 10,720,400 persons (9:2).

Information on the movie-going habits of the public school children came from the motion picture section of leisure-time activities made by the San Francisco School Department. Of 22,000 pupils in the fourth to eighth grades, eighty-seven percent went to the movies during the period from Friday evening to Sunday. An even

larger percentage of the parochial school children confined movie attendance to the week-end. Through the cooperation of the Archdiocesan Schools of San Francisco and Oakland, about 8,000 pupils in the grades four to eight completed questionnaires on their movie attendance and preferences, and it was found that ninety-eight percent were week-end movie fans (9:5).

In a report of an inquiry conducted by the commission on educational and cultural films into the service which the cinematograph may render to education and social progress the statement was made:

The commission has not been concerned merely with a sectional or a scholastic issue, but with the future of cinematography as a cultural influence whose power we do not yet know. It is a new medium which may turn to our service, but which may easily be turned to our disservice. Even with children the needs of the school are not only the needs of the classroom--they would be simpler if they were. For a generation of film-going children is learning to pick up points and impressions on the screen very quickly--just how quickly and how permanently we do not yet know. It is as important to train their tastes in films as in music; from the social point of view more important. If the standard of public taste is to be raised we must begin with the children. Here the school links up again with the public cinema (3:146).

The News Letter of March, 1940, reported a weekly theater attendance of approximately fifty-five million persons in the United States in 1938 (4:1).

A summary of the last few paragraphs would indicate with assurance that motion pictures are playing a definite

role in shaping the educational and cultural lives of the children both here and abroad. It is evident also, that educators are aware of this influence and are working rapidly to include the use of motion pictures in their schools, but almost entirely from an educational standpoint. There is great need, even at present, for many research studies to be made with regard to this school use. This study, it is hoped, will help to advance the organization of film usage in the schools of Arizona.

CHAPTER II

HISTORICAL STUDIES IN THE USE OF MOTION PICTURES

Motion pictures are pictures creating the illusion of activity, process, growth. It was precisely for the purpose of picturing movement, movement as it actually takes place in experience, that the cinema was invented.

Because part of this study has been concerned with the historical phase of motion pictures, it is necessary to present a brief resume of the development of cinematography.

Early History

Dent (5:85) gave an interesting bit of history when he wrote that the principle of the motion picture has been known to mankind for three or four thousands of years. Historical records indicate that in ancient China there were devices which produced the effect of motion perceptible to the eye. One of those devices was explained as being a dark box in one end of which was a small peep hole and in the other end a square hole about three inches in dimensions. Some enterprising Chinaman with artistic ability had painted similar pictures in sequence on a strip of silk approximately three inches in width, and this strip of silk was pulled past the large opening while Chinaman No. 2 placed one eye at the small hole to see those marvelous pictures of action.

History: 1889-1941

In turning to the actual production of motion picture film, the United States Bureau of Education (6:587-597) reported that the first photograph of the human face in motion was exhibited in a photographer's window in Sloane Street, London, England, in 1889. That crude attempt was made under great difficulties. William Friese Greene, the experimenter, made his own film, emulsionized it, cut it into 20 or 25 foot lengths, and projected it with the same mechanism he had used in his camera for making negatives. The experiment was widely commented upon in the papers of the time. This was a decided advance upon the zoetrope and Edward Muybridge's experiments with a battery of cameras whose shutters were released by snapping a series of threads as trotting horses passed and broke them.

Simultaneously with Greene in England, Thomas A. Edison was making experiments in America with the kinetoscope. The American Mutoscope Co. also brought out their machine about the same time. Both these machines were used extensively at fairs and penny arcades.

It was only when George Eastman perfected the film so well known at the present day that cinematography made any material advance, for the long film made it possible for for the first time to get satisfactory results. Then the Messrs. Lumiere, in Lyon, France, made their machine for

projection on the screen. The Messrs. Gaumont followed. Simultaneously Marey and Demeney, of Paris, began their experiments, making great improvements in the mechanism of both the camera and the projecting machines. During the next five years makers of cameras and of projectors sprang up everywhere, each vying with the other to do something better than his fellow. From 25 foot lengths the film was extended to 50. Then a method of joining was discovered, which made it possible gradually to increase the length of the negative film to 400 feet, and the positive to the present day reel of 1000 feet.

The popularity of cinematography grew so rapidly that the manufacturers could not supply the demand and the showmen became manufacturers.

At first the pictures were mediocre in quality and ridiculous in treatment. They were almost exclusively devoted to comedy of the "slap-stick" type. The novelty of movement in pictures was so great that the quality of the subjects was overlooked. The public soon tired of such pictures, however, and in response to the evident demand, manufacturers in England began to photograph scenery, pleasure resorts, seaside views, fire-brigade drills, and the like. The example was followed in other countries, and a high degree of excellence was obtained, especially in France.

The Boer war gave the first real impetus to the industry. Mr. Charles Urban, of London, dispatched to South Africa a staff of photographers, who sent their negatives to England for development; and all over the world scenes of the war were flashed on thousands of screens. Thus originated the "moving-picture bulletin," or animated newspaper. Since then practically every important event in the world's history has been written on cinematograph film, instructing thousands in a language that can be understood by people of every nationality.

During the period of progress, it was often difficult to find suitable subjects, and anything the manufacturers chose to thrust upon the public was exhibited by the showmen. Many of the subjects were French, and they may or may not have satisfied French audiences; but when they were imported to America and England some of them proved to be entirely too broad for the more particular taste of those countries.

Gradually the practice arose of forming stock companies to act complete plays under the direction of full-fledged stage managers. A new profession grew out of this change, that of scenario writing. At first, the manufacturers exercised little care in the selection of plays, and apparently took anything that was submitted to them, paying from \$5 to \$15 for a script. These were frequently based

upon train robberies, hold-ups, burglaries, shootings, murders, elopements, and domestic infelicities more or less questionable in tone. Those films were made by the thousands, until an outraged public raised a protest, and the authorities of various cities began to censor some of the most flagrant violations of decency. Then pictures of cowboys, wild west stories, made-up Indians, and similar subjects were made to head the list. Those rapidly died out, and elaborate and carefully staged pictures, such as biblical, mythological, historical, and classical plays were given prominence.

During the process of evolution came the demand of intelligent audiences for a larger number of high-class films. Charles Urban, of London, was notably successful in meeting that demand. He saw the need and tried faithfully to supply it. Pathe' Freres, Gaumont, and Eclair, of Paris and America, ably supported him, and today a great number of excellent scientific, artistic, historical, religious, and other films are available for educational purposes.

Films available for educational purposes were manufactured by several foreign firms, who shipped them to this country and through various agencies endeavored to create a demand for their wares. But the business of distribution was practically in the hands of a few men, who were making greater profit from the amusement side, and little advance was made in introducing strictly educational films. Never-

theless, the films available about 1913 covered a large field and were easily procurable from England, France, Germany, and Italy. Those made in America were confined almost entirely to experiments with chemicals and liquid air, and a small number of subjects in hygiene. A few made under the supervision of scientists were not available for general use.

The period from 1913 to 1918 is reviewed by Dent (5:87-88), who wrote that, although Edison's early dream was the utilization of the motion picture for educational purposes, it strayed far from that purpose before it again returned to the educational field. The first intensive application of the motion picture to educational procedure occurred immediately before and after the world war, and largely for propaganda purposes. Motion pictures were found to be so valuable during that period that the close of the war brought into existence many types of educational films and film producers. Henry Ford launched a production program covering large numbers of pictures for educational use, many of which were the best available at that time. The large industrial organizations had found motion pictures to be especially helpful within the organizations, and began preparing pictures which could be used to educate the public with respect to the functions of those organizations. Educational film producers sprang up

in various parts of the country. Since the majority of them did not seek or receive the counsel of educational authorities, many of the films produced were of little or no value in the school. The first use of the motion picture in schools was largely for the purpose of entertaining the student body.

The period of enthusiasm for the application of motion pictures to the instructional fields, from 1914 to about 1920, was followed by a decided slump. Those who had purchased elaborate projection equipment largely upon the representation of salesmen that unlimited quantities of highly educational films would be available at little or no extra cost, found that the supply of films was not as extensive as had been represented; that many of the so-called educational subjects were not increasing pupil achievement to any measurable extent.

During the early period of enthusiastic use of educational pictures and the period of the slump which followed, certain experimental psychologists and educators had given attention to the possible uses and values of the motion picture in educational procedure. It was found that there were certain definite values to be expected from the proper use of the motion picture, and those findings were instrumental in causing larger and more stable organizations to undertake the production of strictly educational films.

Perhaps the first creditable move in this direction was made by the Society for Visual Education with its science and geography films. The next major project was started by the Yale University Press when it began the production of the Chronicles of America Photoplays. These pictures remain the finest historical subjects ever produced, and are used extensively by schools throughout the United States. The Yale production program was followed closely with the announcement of the Eastman Teaching Films to be produced and distributed by a subsidiary of the Eastman Kodak Company. Other producers came into the field, particularly those who were interested in producing industrial films of an educational nature — films which would give a true story of the various industries to interested groups.

Thus, a brief summary of the development of the cinema has been given. There were, however, other factors to be considered in that process of evolution.

Retardation

As was mentioned in Chapter I, a number of things have helped to cause the retardation of the use of films in schools. To show the thoughts of some educators along this line, these statements from the United States Department of Education in 1936 (1:33) are cited:

The use of motion pictures in schools is not as extensive as might have been anticipated. One reason for this is the cost of motion pictures. Indeed, many believe that prohibitive cost alone has been responsible for the retarded development of motion pictures in educational fields. One serious expenditure in connection with motion pictures for schools is the initial cost of the projector. That this has been an important factor in the slow development of the use of motion pictures in education is brought out by the fact that the retardation persisted in spite of a steady accumulation of available free films. Unquestionably the fact that most of these free films were only indirectly educational accounts for the reluctance on the part of school officials to take advantage of them. Nevertheless, it would be difficult to maintain that the application of motion pictures to education in the face of such a wealth of free film material would have been equally slow if the cost of projection had been less.

The Department, in the survey of schools over the United States, reported the difficulties listed by administrators which accounted for the fact that audio-visual aids were not used more widely in schools. Those are given here in order of the number of times mentioned by school officials:

1. Insufficient budgetary provisions.
2. Lack of aids in classroom when most needed.
3. Teachers insufficiently trained in use of aids.
4. Available aids inadequate in scope.
5. Lack of understanding of values.
6. Lack of information on sources of desirable films and other aids.

Reaction to this retardation in England is found in the book, *The Film in National Life* (3:58-59), which stated

that a vicious circle prevented the production of films made specially for the schools, though the trade was alive to the possibilities of that market. Producers would not make films until more schools possessed projectors: schools would not install projectors until more films were available to use in them.

Ellis and Thornborough (6:22) have written that a well-known producing and distributing company which pioneered in the educational field and produced a number of worthwhile and successful films highly commended by the non-theatrical users had abandoned the educational field after a comprehensive study of the situation and consistent trial and effort lasting over a period of several years.

Those authors wrote:

"It simply does not pay to try to meet the needs of the non-theatrical exhibitor," said an officer of this company, discussing informally the educational film field.

"The non-theatrical exhibitor is usually a poor man. He is unreliable, far from a steady customer. He does not know what he wants, yet he is dissatisfied with what has been produced, or else he wants us to produce a film according to his ideas to meet his needs without stopping to consider that such a film might meet the needs of no other user of educational films. In addition, his equipment is often poor. He damages the film far more than does his theatrical neighbor, and yet is willing to pay less than a fifth of the price the theatrical exhibitor expects to pay. It is because the non-theatrical exhibitor wants everything for nothing or practically nothing that we have abandoned, at least for the present, the non-theatrical field.

The few dollars which the relatively few non-theatrical users of films are willing to pay for films are not worth bothering with. We have found from experience that it simply does not pay to pass the films over the counter to these customers, and it will not be a paying proposition until the demand for educational films increases from about 400 requests per day scattered throughout the entire country to about 4000 concentrated in key centers."

The foregoing comment on the educational film situation coming from a well-known producing and distributing company is significant. It is a severe but in many cases a true indictment of the non-theatrical users of films. It is the user of films here described that hinders rather than helps the cause of visual education. The cause can be furthered by business-like methods on the part of educators using films and their willingness to pay fair rental prices.

Federal Government

It is important to note the leading steps taken by the federal government in educational film production. It was stated in a report by the New York Regents (8:13) that, although a large number of the departments and agencies of the federal government engage in the production of motion picture films, the Department of Agriculture is by far the most active in that group. That department is said to be the largest producer and distributor of educational films in the world. Ellis and Thornborough (6:18) have said that the manner of growth and development of the pioneer educational film work of the United States Department of Agriculture holds much interest for those concerned in visual education. The work was not formally established until 1918.

Distribution

Since public schools over all the United States were using films, a necessity for a method of distribution arose. A number of agencies took the responsibility. Following is a table taken from a report of the United States Office of Education for 1936 (7:9) showing the numbers of agencies that had motion pictures for distribution to schools:

TABLE I

Number	Agencies
19	Federal Government Agencies
10	State Departments
52	Colleges and Universities
2	Libraries
10	Museums
21	Voluntary Associations
60	Select Commercial Dealers
174	Total

From the Visual Review for 1939 (12:45) a report was taken of the Association of School Film Libraries. It is a non-profit corporation and was established in June, 1938, to bring about more effective distribution of motion

pictures to American educational institutions.

The purposes of the Association are:

1. Find all the educational institutions equipped to use films, or interested in securing such equipment and organize them in the Association's membership.
2. Search out all films with educational possibilities, have them analyzed and evaluated and circulate this information in an accumulative catalog.
3. Make available for educational use the desirable films heretofore unavailable by securing pictures now tied up in the theaters.
4. Determine the desirable subjects not covered by films and advise producers so they may be covered.
5. Keep educators and film producers and distributors up to the minute on developments in the business through a subscription information service.
6. Establish regional, state and local film libraries, probably in universities and departments of education, to serve through rental those institutions unable or unwilling to set up their own libraries.
7. Reduce prices of films and equipment by increasing and stabilizing the combination market.

Courses in Visual Aids

In-service teachers as well as those studying for the profession found that it was their responsibility to administer the visual aids program. Slowly, instructional courses have been put into the colleges and universities. The Instructional Sound Films Bulletin (4:1) reported more than 150 summer schools offering audio-visual aids courses

in the summer of 1940.

Department of Visual Instruction

At the Arizona Education Association convention held in Phoenix in November, 1938, a group of educators interested in visual education met and discussed forming a department of visual instruction. At that meeting Mr. A. W. Bork, who was director of the university film library, was elected chairman for the following year.

At the convention, in November, 1939, Mr. Bork and his fellow officers led interesting meetings. Included on the program were: Dr. Edgar Dale, Ohio State University; Mr. Darcy Skaggs, director of visual instruction, Mesa City Schools; and Mr. J. C. Hays, instructor of history, Phoenix Union High School. At the last meeting Mr. Skaggs was elected chairman for the following year.

The meeting in the fall of 1940 was held in Tucson, and as the author was not present, no record is made here of the proceedings.

Similar Studies

Five reports were found which were somewhat similar to the nature of this thesis. These were studied and summaries of each follow.

In December, 1919, there were 38,282 questionnaires sent out by the visual instruction section of the division of educational extension, Bureau of Education, Department of the Interior, (10:1-12) to locate motion-picture projection machines in use for purely educational purposes in the United States. There were 10,351 replies. A part of the information contained in the replies was tabulated as follows:

1. Universities, colleges, normal schools, high schools, and elementary schools having motion-picture projection machines -----	1,129
2. Those schools intending to install projection machines at once -----	384
3. Those having arrangements with a local theater, public hall, library, club, or church by which educational pictures might be shown for the benefit of students -----	2,177
4. Those not having projection machines or the use of projection machines and not planning to install at once -----	6,761
	<hr/>
Total	10,351

Each state was listed and following the state was given a list of the school systems which owned motion-picture projectors. In Arizona, at that time, there were machines in four systems, namely:

TABLE II

City	Systems	Machines
Globe	Public Schools	Powers 6A
Globe	High School	Powers 6A
Miami	Public Schools	Powers Cameragraph
Tucson	Univ. of Ariz.	DeVry Portable & Powers 5

That report also gave a list containing 712 reels of industrial films of educational value in the possession of associations and commercial and manufacturing companies.

The second report was a survey in 1937 by the Victor Animatograph Corporation (11:1-2,9-10), on the utilization of visual aids, including silent and sound motion pictures and other visual aids, administrative arrangements, teaching techniques, teacher training and expansion of program.

A mailing list of approximately 10,000 names was made up from the list of owners of all types of visual equipment appearing in the National Educational Directory, published by the American Council on Education in 1936, and supplemented by those who were known to have purchased motion picture equipment either sound or silent since the publication of the directory. A questionnaire including

various types of visual aids was mailed to that list.

The report of findings was based upon a seven percent return of the mailing. Eighty-two percent of the returns came from twenty-one states having organized programs of visual instruction either in State Departments of Education or the Extension Divisions of State Universities. Eighteen percent of the returns were divided among twenty-seven states, including the District of Columbia, which had no organized program. The result was an average sampling of less than fifteen schools per state, enough, however, for the corporation's purpose.

General conclusions of the survey were listed as follows:

TABLE III

Specific Problems in Individual School Systems

Financial	37%
Administrative	23%
Teacher Training	19%
Problems Concerning Film Supply	21%

Recommendations for Films Required

Subject Matter:

Science	18%
History	16%
Social Studies	16%
Geography	8%
English	8%
Literature	7%
Health and Hygiene	6%
Vocational Guidance	3%

Civics

Travel

Music

Safety

Reading

Character

Commercial Studies

Languages

Nature Study

Home Economics

The remaining 18%
divided among
ten subjects

Grade Levels:

High School	29%
Grades 1 through 12	28%
Elementary	26%
Junior High School	17%

Types of Films:

Sound	58%
Silent	15%
Sound and Silent	27%

It was interesting to find that seventy percent of those owning sound projectors recommended that the future production of motion pictures be limited to the sound field; two percent recommended the production of silent films exclusively; while twenty-eight percent indicated that there was a need for both sound and silent motion pictures.

Also, the owners of silent motion picture equipment placed greatest importance on the production of sound films. Thirty-nine percent advocated the production of sound films exclusively; only thirty percent recommended the production of silent films alone. Thirty-one percent stated that they felt there was a need for the production of both sound and silent films.

Forty-eight percent of the owners of both sound and silent equipment indicated the need for the production of both sound and silent films. Forty-five percent recommended sound exclusively; and seven percent specified the need for silent motion pictures.

Fifty-four percent of those recommending the kind of films required, suggested the need for instructional films exclusively; seven percent recommended recreational films only; and thirty-nine percent indicated that there was a need for both recreational and instructional films.

In 1936 a survey was made of New York state for a

report to the Regents (8:46). A summary of the findings is listed in the following table:

TABLE IV

	16 Millimeter		35 Millimeter	
	Si.	So.	Si.	So.
Projectors owned	843	25	291	18
Films owned	5,014	59	218	00
Free films borrowed	5,829	176	978	201
Films rented	3,323	425	181	125

The report showed a total of 1,177 projectors in use in the state. There was a much larger number of silent films being used than sound films. The table indicates that there were nearly half as many films owned as were rented and borrowed; also, that the number of films borrowed was much higher than the number rented.

The fourth report is that of a survey made by the United States Office of Education in 1936 (7:53). It was found that the following number of elementary and secondary school systems owned projectors:

TABLE V

Number	Types of Projectors
6,074	16 millimeter silent projectors
458	16 millimeter sound projectors
3,230	35 millimeter silent projectors
335	35 millimeter sound projectors

That was a total of 10,097 projectors in use in the United States in that year. The table indicates that there were nearly twice as many 16 millimeter projectors in use as there were 35 millimeter machines.

The fifth report was that of the University of Colorado film library (2:1-2). That library made a survey of the sound motion picture situation in the Rocky Mountains. In October of 1938, in an attempt to discover the extent of the use of sound motion pictures in schools, and to find out if possible the need for the establishment of a sound film library to supplement the silent, 16 millimeter film library at the University of Colorado, 500 questionnaires were mailed to school officials in Colorado and those neighboring states which depend to some degree on the Bureau of Visual Instruction for their film service.

To make the establishment of a bureau feasible, a letter of explanation accompanied the questionnaire in which a

plan for financing the project was suggested, in case sufficient schools had or contemplated the purchase of a sound projector in the near future. An enrollment plan was submitted which suggested a tentative fee of \$50.00, for which a school would receive 36 one-reel, educational films, comparable to the Erpi subjects, and unlimited use of industrial and scenic pictures, during the school year. The letter made it clear that the enrollment figures were tentative, the main idea being to secure assurance of support in case the library were established.

The questions asked were:

1. Do you have a 16 millimeter, sound motion picture projector in your school?
2. If not, do you plan to purchase one in the near future?
3. If a library can be started, are you willing to participate by subscribing for an enrollment and paying for it in advance, the tentative price being \$50.00?

With only sixteen schools in Colorado that reported sound projectors, and not all of those able to subscribe to a film service, it seemed evident that at that time, the demand for a sound film library was not enough to warrant the expenditure necessary to start a library worthy of the name. Several schools reported that they had or were buying a sound projector, but that they did not have funds to buy any sort of film service. Several schools reported that they had found the silent pictures

satisfactory for classroom use and one or two suggested an increase in the silent films rather than the expenditure to start a sound film library.

Thus, a resume of the historical foundation for the use of the modern educational films has been presented, followed by a report of similar studies. These factors lead to a report of the methods used and the results of this thesis problem.

CHAPTER III

THE PROBLEM

In obtaining material for this thesis concerning motion picture usage in Arizona public schools, several methods of procedure were combined to furnish the data. Included in those methods were: historical records of the development of cinematography, historical records of film use in Arizona schools, personal interviews with educators and visual aid dealers, letters from film libraries outside of Arizona, and a survey of the state by questionnaire. The first of these has been discussed in the preceding chapter. A discussion of the others is to follow.

Film Use in Arizona Public Schools

In January of 1940 the writer visited the offices of Mr. Max P. Vosskuhler, director of the visual education division of the University Extension Division at the University of Arizona since its very beginning. Every record which might be of value in the study was made available. The only records which had been kept concerning the development of film usage were contained in annual reports to the president of the University. These, although brief records, furnished data about the growth of the film library. That growth was a good indication of statewide growth, for that library had been the primary source

of films for the schools of the state since the start. Much information was received from Mr. T. E. Nichol, who was in direct charge of the film library.

From that visit to the University of Arizona, the following data were obtained concerning the growth of the visual aids library:

1920-1921

During that year the film library started operating. There had been no appropriation of funds for the purchase or rental of any films. The library secured film loans of about 100 reels from the Bureau of Commercial Economics, the Bureau of Education, the Red Cross Society, and the Ford Weekly concern. Those were chiefly industrial films, depicting particular processes, the methods followed along certain lines of manufacture, the production of utilities, and a few geographical films. No charge was made for the films except transportation. There were no specific tests made in the use of films to raise educational standards in schools. The library obtained a standard-sized (35 millimeter) Powers machine and a Portable De Vry machine. During the year 31 institutions or organizations were served with more or less regularity, with 250-300 per showing.

The 31 institutions or organizations did not necessarily mean schools. Many were farm groups, forest and agricultural groups and government Indian reservation agencies. Some of the schools who did get films showed them in the neighborhood theater on Saturdays, because there was no projector in the school.

1921-1922

32 shipments--68 reels--14 communities--6,795 people

1922-1923

68 shipments--192 reels--30 communities--12,704 people

1923-1924

79 shipments--221 reels--40 communities--19,060 people

The library borrowed about 75 reels from the Bureau of Commercial Economics and Industrial sources.

"We should have some strictly educational, as well as more scenic and industrial films, with a selection of clean, short comedies to 'spice the programs'."

1924-1925

120 shipments--323 reels--18 communities--29,332 people

The library made shipments to 12 grammar schools, 6 high schools, 8 Indian schools, and 1 university. It also

loaned the DeVry projector 55 times.

Through the state there were 38 installations of combined movie and slide projection apparatus in addition to 32 movie projectors, chiefly in schools.

"We need more films, strictly educational, and scenic and industrial -- light comedy."

1925-1926

79 shipments--392 reels--31 communities--69,485 people

The library made shipments to 12 grammar schools, 3 high schools, 5 Indian schools, and 1 university.

Safford and Roskrige schools of Tucson used weekly programs. During this year the rental library started. It obtained the Chronicles of America Photoplays comprising 15 sets of 47 reels. The DeVry projector was loaned 44 times.

Loan films were difficult to secure.

1926-1927

158 shipments--379 reels--26 communities--45,776 people

The library made shipments to 13 grammar schools, 5 high schools, 8 Indian schools, and 1 university.

A number of the films which had been used were dropped, because most of the schools had seen them. There were 106 film subjects on hand, mostly borrowed from various sources.

For two years the library had asked for at least a \$500 budget.

1927-1928

172 shipments--538 reels--22 communities--36,309 people

The library made shipments to 15 grammar schools, 6 high schools, 9 Indian schools, and 1 university.

The report for that year gave a list of the names of schools using the films. Those will be included in a following table.

1928-1929

164 shipments--431 reels--30 communities--32,868 people

The library made shipments to 16 grammar schools, 5 high schools, 6 Indian schools, and 2 universities.

1929-1930

202 shipments--543 reels--42 communities--44,483 people

The library made shipments to 16 grammar schools, 8 high schools, 7 Indian schools, and 1 university.

That year there were eight rental showings.

1930-1931

154 shipments--455 reels--19 communities--33,255 people

The library made shipments to 15 grammar schools, 7 high schools, 4 Indian schools, and 1 university.

1931-1932

207 shipments--730 reels--28 communities--29,056 people

The library made shipments to 9 grammar schools, 10 high schools, 7 Indian schools, 1 college, and 1 university.

Schools in Colorado, Michigan, New York and Wyoming received films from the library.

1932-1933

190 shipments -- 728 reels -- 23,952 people

The library made shipments to 11 grammar schools, 9 high schools, 5 Indian schools, and 1 university.

One Indian school in Colorado received films.

1933-1934

225 shipments -- 715 reels -- 37,903 people

The library made shipments to 10 grammar schools, 5 high schools, 6 Indian schools, 1 college, and 1 university.

1934-1935

486 shipments -- 1,119 reels -- 94,979 people

The library made shipments to 30 grammar schools, 8 high schools, 10 Indian schools, and 1 university.

A junior high school in Portales, New Mexico used one film.

During the year the bureau bought 126 silent 16

millimeter subjects on geography, history, science, and health. It also had 47 reels available. Of those, 200 were 16 millimeter and 250 were 35 millimeter.

1935-1936

564 shipments -- 1,375 reels -- 150,641 people

The library made shipments to 62 grammar schools, 6 high schools, 3 Indian schools, and 1 university.

Four schools in New Mexico used films that year.

1936-1937

701 shipments -- 1539 reels -- 237,622 people

The library made shipments to 70 grammar schools, 15 high schools, 3 Indian schools, 1 college, and 1 university.

Films were sent to schools in Arkansas, California, New Mexico, and New York.

During the year the bureau bought 46 more reels of silent 16 millimeter film and its first unit of 23 sound reels. This made the total owned by the bureau 133 reels. All 35 millimeter films were discontinued. The bureau had only 21 reels in its collection.

1937-1938

741 shipments -- 1,426 silent reels -- 103 sound reels -- 251,531 people

The library made shipments to 57 grammar schools, 7

junior high schools, 14 high schools, 2 colleges, and 1 university.

Reels owned by the bureau -- 229 silent and 29 sound.

Reels which were available -- 354 silent and 33 sound.

One school in California and one college in New Mexico used films during the year.

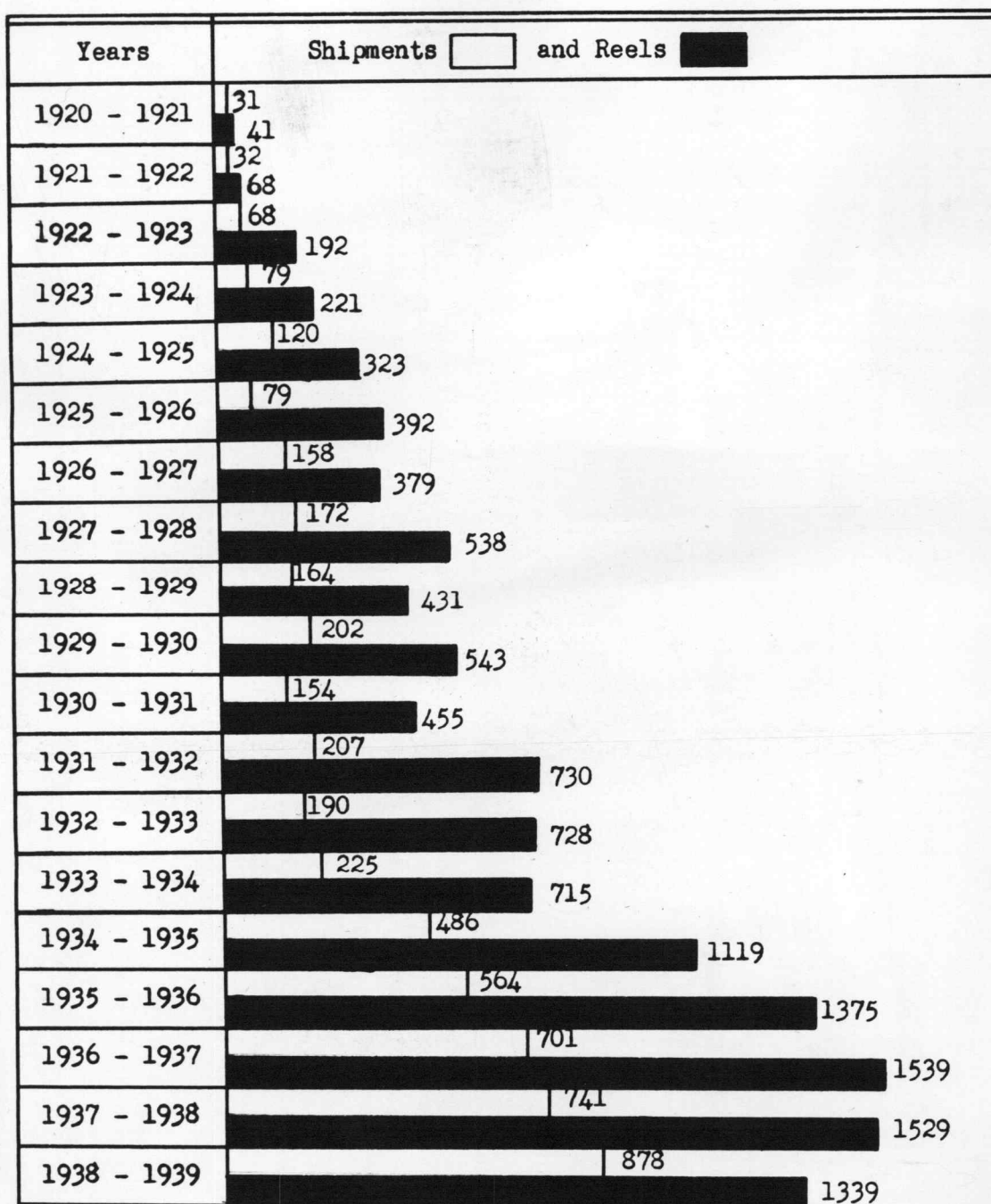
1938-1939

878 shipments -- 1156 silent reels -- 183 sound reels--
583,773 people

The library made shipments to 78 grammar schools, 15 high schools, 4 Indian schools, and 4 universities.

Out-of-state schools to receive films were in California, Idaho, Nebraska, New Mexico, Ohio, Rhode Island, and Wisconsin.

The following bar graph is produced to show the progress of the number of film shipments and the number of reels shipped from 1920 to 1939:

GRAPH I

The following bar graph is produced to show the progress of the number of people viewing films from 1920 to 1939:

GRAPH II

Years	People Viewing Films
1920 - 1921	5829
1921 - 1922	6795
1922 - 1923	12,704
1923 - 1924	19,060
1924 - 1925	29,332
1925 - 1926	69,485
1926 - 1927	45,676
1927 - 1928	36,309
1928 - 1929	32,868
1929 - 1930	44,483
1930 - 1931	33,255
1931 - 1932	29,056
1932 - 1933	23,952
1933 - 1934	37,903
1934 - 1935	94,979
1935 - 1936	150,641
1936 - 1937	237,622
1937 - 1938	251,773
1938 - 1939	283,772

The following table contains a combination of the data in the two preceding bar graphs:

TABLE VI

Years	Shipments	Reels	Av. Reels Per Ship.	People
1920-1921	31	31	1	5,829
1921-1922	32	68	2	6,795
1922-1923	68	192	3	12,704
1923-1924	79	221	3	19,060
1924-1925	120	323	3	29,332
1925-1926	79	392	5	69,485
1926-1927	158	379	2½	45,776
1928-1929	164	431	3	32,868
1929-1930	202	543	2½	44,483
1930-1931	154	455	3	33,255
1931-1932	207	730	3½	29,056
1932-1933	190	728	4	23,952
1933-1934	225	715	3	37,903
1934-1935	486	1119	2½	94,979
1935-1936	564	1375	2½	150,641
1936-1937	701	1539	2	237,633
1937-1938	741	1529	2	251,773
1938-1939	878	1339	1½	283,772

TABLE VII

SCHOOLS USING FILMS FROM THE UNIVERSITY OF ARIZONA FILM LIBRARY

Early Users Only	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	Machines
Arlpine	X	X	X															none
Clay Springs	X	X	X															none
Hayden		X	X	X	X	X	X	X										1 (out of order)
Heber	X	X	X															none
Holbrook	X	X	X	X	X													1
Humboldt	X					X	X											none
Joseph City	X	X																none
Morenci		X			X			X										1
Pima	X				X	X				X								none
Pinedale	X	X	X															none
St. Johns		X					X											none
Showlow	X	X																none
Snowflake	X	X	X	X	X	X												none
Springerville	X			X						X	X							none
Taylor	X	X	X	X	X	X												none
Woodruff	X	X	X															none
Zeniff	X	X																none
Have not used Tucson's films																		
Camp Verde																		1
Copress																		1
Cornville																		1
Gadsden																		1
Peach Springs																		1
Torona																		1
Wickenburg																		1

Indian Schools	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	Machines
Canyon Diablo						X												none
Chin Lee									X									1
Colo. River					X				X	X	X							1
Escuela	X	X	X	X	X	X	X	X	X	X	X			X				uses Tucson's
Pt. Apache		X				X												none
Pt. Defiance					X	X							X					none
Omado				X	X													none
Keams Canyon					X	X												none
Komatke				X	X	X	X	X	X	X								none
Lakeside		X	X	X														none
Leupp			X									X	X					1
Oraibi			X	X														4
Rice		X					X											none
Sacaton					X										X			none
Sahuarita																X		none
San Carlos												X	X	X				none
Sells			X									X	X			X		1
Shumway			X	X														none
St. Michael			X		X													none
Tubac															X			none
Tuba City			X		X	X	X									X		none
Valentine					X	X			X	X								none
White River	X	X	X	X	X											X		none
Window Rock																X	X	none

Users All Through	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	Machines
Ajo	X						X	X								X	X	2
Bisbee	X	X		X	X	X			X	X	X	X	X	X	X			1
Casa Grande	X	X	X				X									X	X	2
Clarendale	X	X	X							X	X	X	X	X	X			1
Clifton	X					X	X	X			X	X	X	X	X			2
Douglas	X	X	X	X		X	X				X	X	X	X	X			2
Duncan			X	X	X	X	X		X		X							none
Eager	X	X	X	X	X			X	X									none
Flagstaff	X	X	X				X		X	X	X							3
Florence			X	X		X									X			none
Pt. Thomas	X					X					X	X	X					none
Gilbert	X	X	X	X	X	X	X				X	X	X					2
Glendale			X	X	X	X									X			1
Globe	X	X	X	X	X	X	X			X	X	X	X	X	X			2
Grand Canyon			X	X	X										X			1
Inspiration	X	X	X	X			X				X	X	X					uses Miami's
Jerome				X	X	X									X	X		none
Nogales	X					X								X				none
Phoenix	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X		20
Pine				X					X					X				none
Prescott	X	X	X	X		X					X	X	X	X	X			3
Ray	X					X								X				uses Hayden's
St. David	X		X	X	X					X	X							2
Superior	X		X	X	X			X	X	X				X				1
Tucson	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X		9
Willcox	X	X		X			X	X	X	X	X	X	X	X	X			1
Yuma			X	X												X		2

Late Users	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	Machines
Benson						X						X				X		2
Bowie												X	X					1
Buckeye	X														X	X		none
Chandler								X			X					X		2
Chloride												X	X	X	X			1
Clemenceau												X	X	X	X	X		1
Coolidge												X			X	X		none
Cottonwood																X	X	uses Clemenceau's
Emery Park													X	X	X	X		1
Pt. Lowell									X					X				none
Gila Bend														X				2
Lavaca														X				none
Liberty														X				none
Marana															X	X		none
Mesa												X	X	X	X	X		3
Miami						X									X	X	X	3
Parker															X			none
Peoria															X	X		1
Safford				X								X						1
San Simon												X	X	X				2
Scottsdale												X			X	X		1
Seligman							X								X			1
Solomonville			X													X		2
Tempe												X	X	X	X	X		3
Thatcher							X									X		none
Tolleson																X		none
Tombstone														X				none
Williams															X			1
Winkelman															X			none
Winslow	X	X													X	X	X	1

On page 1 of the appendix will be found a list of all the films in the University of Arizona film library in January, 1940.

Personal Interviews

Many items of interest and related data were obtained by conversations with a number of educators who have been connected with the field of visual instruction in schools for some years. The names of those people are as follows: Mr. W. T. Machan, principal of Creighton school, Phoenix; Miss Mary Spaulding, instructor of geography, Creighton school, Phoenix; Mr. Raymond N. Cowley, instructor of social studies, Phoenix Union High School; Mr. J. C. Hays, instructor of history, Phoenix Union High School; Mr. Everet Johnson, director of research, Phoenix City Schools; Mr. Darcy Skaggs, director of visual instruction, Mesa City Schools; Mr. A. W. Bork, instructor of Spanish, the University of Arizona, former director of the film library; Mr. T. E. Nichol, director of the film library, University of Arizona; and Mr. Max P. Vosskuhler, director of the extension division, University of Arizona.

Some of the most valuable data came from the visual equipment dealers of the state. Those men were kind enough to supply lists of schools in the state using their particular types of projectors. The combined list will be found later in this chapter. The names of those men

are as follows: Mr. Pete Wist, member of the firm of Peterson, Brooke, Steiner, and Wist, state distributor for the Victor Animatograph Corporation; Mr. R. G. McKinney, salesman for the O. B. Marston Company of Phoenix, state distributor for the DeVry Corporation; Mr. Kenneth Kelton, state distributor for the Bell and Howell Corporation; and Mr. Earl Roland, travelling service man for the Victor Animatograph Corporation.

At the time the study was made, no other manufacturer of projection equipment had vested the distribution of such in any one person or firm. It was found that none of those companies was making a very determined effort to interest schools in its equipment.

Correspondence With Film Libraries

Letters were sent to two film libraries, which were close enough to Arizona to supply the schools of the state with a number of films. The directors of the libraries were asked for data dealing with the number of films sent to Arizona schools and the approximate percentage of their total distribution which the number would represent.

Miss Lelia Trolinger, director of the Bureau of Visual Instruction, University of Colorado, reported the following approximate figures for the fiscal year, July 1, 1940 to June 30, 1941:

<u>Name of Town</u>	<u>Number of Films Used</u>
Phoenix	38
Seligman	13
Mesa	52
Safford	88
Tucson	<u>3</u>
Total	194

Total number of films circulated 5,952.

Percentage used by Arizona $3\frac{1}{4}\%$.

Miss B. E. Luthje, exchange manager of the Y.M.C.A. Motion Picture Bureau in San Francisco, reported that her library does not keep records of the number of films shipped to individual states, but she advised that they were serving 78 exhibitors in Arizona as of November 1, 1940. That was the number of actual 16 millimeter sound film users.

The Questionnaire

In April of 1940 a questionnaire sheet was sent with a personal letter to 105 public school systems in Arizona. Of those, 85 school officials properly filled out the data sheets and returned them. That was approximately an 81 percent reply. Of the 85 school systems reporting, there were 33 who stated that they did not use motion pictures. The remaining 52 did use films. These were most cooperative

in supplying data desired and in giving comments as to their attitudes and as to the needs of the program of visual education in Arizona. The questionnaire has purposely not included parochial and private schools, for it was records of the visual education programs in the public schools which were of primary concern. It does, however, include Indian schools, for some of those government agencies were the first to utilize films in education.

Included in the questionnaire were items concerning the number and model of machines, the year of beginning film usage, the number of films owned, for what purpose films are used, the number of film subjects used in 1938-1939, the rating of courses of study in order of number of films used, the rating of film libraries in order of number of films obtained, the method of financing the program, and the attitudes of the administrator as to the value of motion picture usage in Arizona schools.

The questionnaire sheet was submitted to the State Superintendent of Public Instruction. In the appendix will be found a photostatic copy of Superintendent Herman E. Hendrix' endorsement of the questionnaire, a map of the state of Arizona with names of all the towns included in the survey, a copy of the personal letter sent the school officials, and a copy of the questionnaire.

Following is a list by counties of the schools to which questionnaires were sent and their average daily attendance:

TABLE VIII

<u>APACHE</u>	A.D.A.	<u>GRAHAM</u>	A.D.A.
Ganado	20	*Ft. Thomas	179
McNary	365	Pima	475
Springerville	272	Safford	1,076
St. Johns	559	Solomonville	407
*Window Rock	14	Thatcher	539
		College	251
<u>COCHISE</u>		<u>GREENLEE</u>	
Benson	292	Clifton	608
Bisbee	2,204	Duncan	597
Bowie	141	Morenci	872
Douglas	2,394		
San Simon	91	<u>MARICOPA</u>	
St. David	172	Alhambra	541
Tombstone	281	Alma	328
Willcox	343	*Avondale	395
<u>COCONINO</u>		Baltz	406
Flagstaff	1,225	Buckeye	697
*College	545	Cartwright	205
Fredonia	118	Chandler	1,090
Grand Canyon	52	Creighton	887
Tuba City	28	Fowler	212
Williams	595	Gila Bend	148
		Gilbert	728
<u>GILA</u>		Glendale	1,793
Globe	1,699	*Grand Avenue	124
Hayden	490	Isaac	243
*Inspiration	59	Kyrene	191
Miami	1,018	Laveen	139
		Lehi	215
		Liberty	302

<u>MARICOPA (con't)</u>	A.D.A.	<u>PIMA (con't)</u>	A.D.A.
Litchfield	392	*Sells	23
Madison	572	Tucson	9,643
Mesa	2,764	University	2,906
*Murphy	382		
Osborn	296		
Pendergast	203		
Phoenix	14,241	<u>PINAL</u>	
Peoria	649	Casa Grande	789
Roosevelt	955	Coolidge	766
*Rural	306	*Eloy	257
Scottsdale	633	Florence	547
Tempe	1,118	Ray	631
College	1,505	*Sacaton	36
*Tolleson	535	Superior	1,115
Washington	559		
Wickenburg	296		
Wilson	914	<u>SANTA CRUZ</u>	
		Nogales	1,253
<u>MOHAVE</u>		*Patagonia	160
*Chloride	132		
Kingman	603	<u>YAVAPAI</u>	
		Ashfork	124
<u>NAVAJO</u>		Camp Verde	124
Holbrook	462	Clarkdale	610
*Joseph City	94	Congress	66
*Oraibi	10	Cornville	20
*Snowflake	446	Cottonwood	398
Taylor	103	Jerome	962
Winslow	1,257	Prescott	1,809
		Seligman	172
		<u>YUMA</u>	
<u>PIMA</u>		*Crane	246
Ajo	914	Parker	343
Ampitheater	742	*Somerton	540
*Emery Park	106	Yuma	1,995
Ft. Lowell	98		
Marana	61		

* Schools to which questionnaires were sent, but which made no reply. Statistics about each were obtained through other sources.

Schools not included in the survey by questionnaire,
but for which there are some reports:

<u>APACHE</u>	Chin Lee	A.D.A. 14
<u>COCONINO</u>	Leupp	18
<u>MOHAVE</u>	Peach Springs	15
<u>NAVAJO</u>	Toreva	12
<u>YUMA</u>	Colorado River	21
	Gadsden	141

Results of the Survey

TABLE IX

Number of silent projectors:

Ampro	3
Bell & Howell	13
DeVry	5
Holmes	2
Victor	28
Others	<u>6</u>
Total	57

Number of sound projectors:

Ampro	2
Bell & Howell	15
DeVry	4
Holmes	1
Victor	24
Others	<u>0</u>
Total	46

There was a grand total of 103 projectors, 3 of which
were 35 millimeter.

The question asked also for the models of the machines,
but such a small number of officials reported the models,
that no attempt was made to include them in this report.

Following is a table listing each school system reporting a projector and the make:

TABLE X

Town	Silent	Sound
Ajo	1 DeVry	1 Victor
Benson		1 Victor 1 B & H
Bisbee		1 B & H
Bowie		1 Victor
Camp Verde		1 Victor
Casa Grande	2 Victor	
Chandler	1 DeVry	1 DeVry
Chloride	1 Eastman	
Clarkdale	1 Victor	
Clemenceau	1 Victor	
Clifton	1 Holmes	1 Victor
Congress	1 DeVry	
Cornville		1 Victor
Douglas		2 Victor
Emery Park		1 B & H
Flagstaff	1 Ampro 1 Victor	1 Victor
Gadsden		1 B & H

TABLE X (Con't.)

Town	Silent	Sound
Gila Bend	1 Victor	1 Holmes 35 mm.
Gilbert	1 Victor	1 Victor
Glendale		1 Victor
Globe	1 Victor	1 Victor
Grand Canyon	1 B & H	
Holbrook		1 Victor
Mesa & Alma	1 Victor	1 Victor 1 DeVry
Miami	1 Eastman 2 B & H	
Morenci		1 Victor
Peoria	1 DeVry	
Phoenix, el.	2 Victor 1 B & H	
h.s.	1 B & H	1 Victor
j.c.		1 B & H
Alhambra	1 Victor	
Baltz	1 Victor	
Cartwright		1 DeVry
Creighton	1 Victor 1 Other	
Fowler	1 Victor	
Isaac	1 Eastman	

TABLE X (Con't.)

Town	Silent	Sound
Madison	1 Victor	1 Victor
Osborn	1 B & H 1 Victor	
Pendergast	1 Victor	
Roosevelt	1 Victor	1 Victor
Prescott	1 B & H	1 Victor 1 B & H
Safford	1 Victor	
St. David	1 Ampro	1 B & H
San Simon	1 Victor	1 Victor
Scottsdale	1 Victor	
Seligman		1 DeVry
Solomonville	1 Victor	1 Victor
Superior	1 B & H	
Tempe, el.	1 Victor	1 Victor
Kyrene	1 Eastman	
Tucson	1 Victor	1 B & H
University	1 Ampro 3 B & H 1 Holmes 35 mm. 1 DeVry 35 mm.	1 B & H

TABLE XI (Con't.)

Town	Silent	Sound
U.S. Indians, Hopi	1 B & H 1 Victor	1 Ampro 1 B & H
Chin Lee	1 Victor	
Colo. River		1 B & H
Leupp		1 B & H
Peach Springs		1 B & H
Sells		1 B & H
Toreva		1 B & H
Wickenburg	1 Victor	
Willcox		1 Victor
Williams	1 Eastman	
Winslow		1 Victor
Yuma	1 B & H	1 Ampro
Totals	57	46
Grand Total		103

On some occasions machines reported are owned by small schools, thereby providing a small number of students the available pictures. The following table was prepared to give the average number of students per machine in each county and to compare the county's average daily attendance with the attendance actually having projectors available:

TABLE XI

Counties	No. Mach.	A.D.A.	Have Proj. Available	A.D.A. per mach.
Apache	1	1,765	14	1,765
Cochise	11	6,877	5,587	625
Coconino	6	2,236	1,890	373
Gila	5	4,560	2,776	912
Graham	3	3,045	1,483	1,015
Greenlee	3	2,184	1,480	728
Maricopa	36	35,080	28,499	972
Mohave	2	1,275	618	638
Navajo	7	2,924	1,741	418
Pima	13	12,390	11,503	953
Pinal	3	5,140	1,904	1,713
Santa Cruz	0	1,960	-----	-----
Yavapai	9	5,068	3,199	563
Yuma	4	3,571	2,157	893
Total	103	88,075	62,851	855

Because of the fact that few administrators had been in their present positions for a long period of time, the records from them concerning the year in which their schools started using films is not very complete or accurate. However, most of that data was supplied by the film library. Possibly there are errors in the exact number of machines in the state, because of the fact that some old 35 millimeter machines have been stored away and not reported. That is of little concern, for the plan of the study was primarily to report present usage.

Four schools reported ownership of from 2 to 6 reels of educational films, five had made short subjects of school activities, and the University film library had 525 reels.

TABLE XII

Films were used for:

instructional use only	14
recreational and entertainment only	1
instructional and recreational	<u>37</u>
Total	52

TABLE XIII

Number of film subjects used in 1938-1939:

Number of schools	Number of subjects
24	0 - 50
12	51 - 100
4	101 - 150
1	151 - 200
2	201 - 250
2	251 - 300

Those ranged from 2 to 300 subjects. There was a total usage of 3,049 subjects, and for the forty-five schools answering that item, an average of 68 per school.

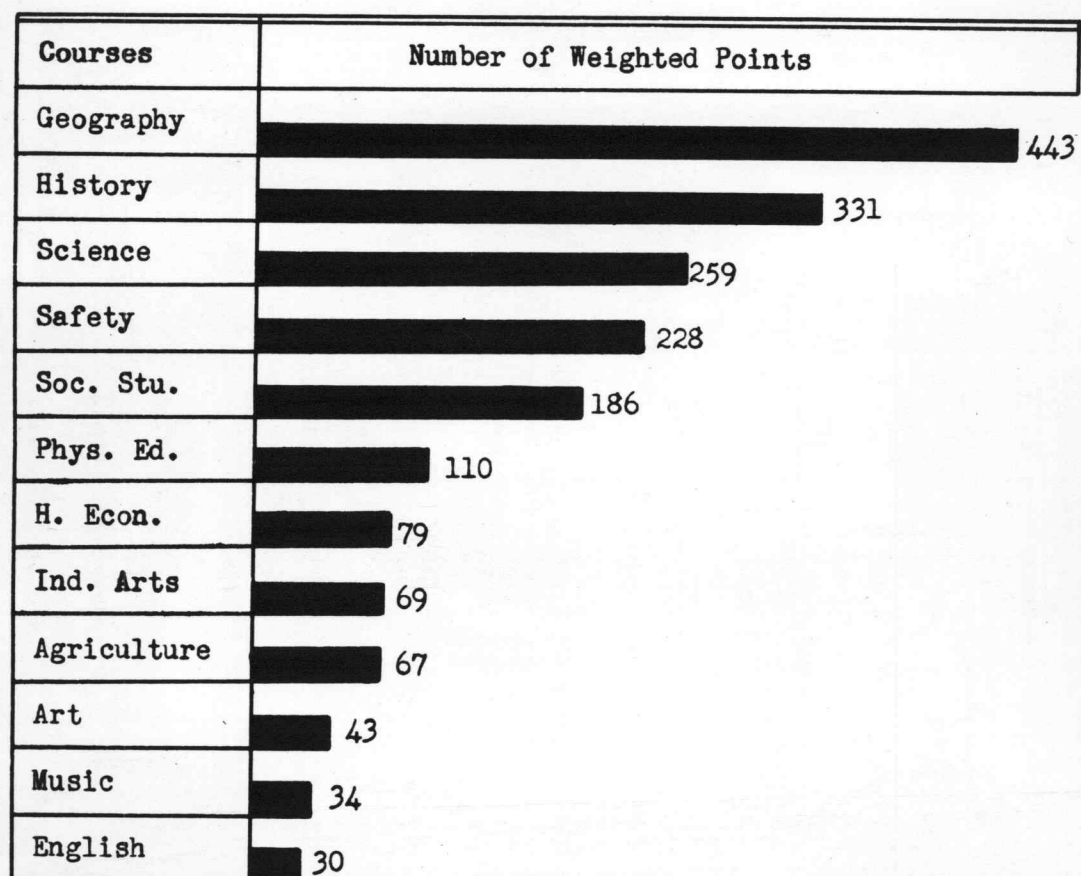
Courses of study in order of number of films used:

TABLE XIV

This table is a combined report of all schools, showing each course and the number of schools who rated the course in the various positions.

Course	1	2	3	4	5	6	7	8	9	10	11	12
Agriculture	2	2		1	1	1	1					
Art			2		1	1	1				1	
English		2				1						1
Geography	31	3	2	2								
History	1	16	11	2	1	1						
H. Econ.				4	4	1			1			
Ind. Arts		1	2	2		2	1					
Music					2		1	1	1	1		
Science	9	6	4	2	3					1		
Phys. Ed.		4	1	2	2	1	1	1	1			
Safety		3	7	9	2	4						
Soc. Sci.	2	5	7	2	1		1	1				

In order to place the various courses in order of the number of films each used, a weighted graph has been prepared. The weighting was simply reversed to the order of position; 12 points for position 1, etc.

GRAPH III

Film libraries which supplied films:

The same method was followed in presenting this data as with the preceding item.

TABLE XV

Libraries	1	2	3	4	5	6
Univ. of Arizona	25	7	2	1		
Univ. of California	2	10	4	2		1
Univ. of Colorado	2	2	3		2	
Y.M.C.A.	3	3	2	3	1	
Industrials	2	4	10	2	1	
Others	5	4	1	2	1	1

GRAPH IV

Libraries	Number of Weighted Points
Univ. of Arizona	196
Univ. of California	85
Industrials	80
Others	63
Y. M. C. A.	52
Univ. of Colorado	38

TABLE XVI

Methods of financing the program:

Board of Trustees	25
Public showings	5
Student activity	8
School funds	23
Others	2

This table signifies that the majority of schools use one of two methods: 25 reporting appropriations from the Board of Trustees and 23 from general school funds.

The collective experiences of educators who have utilized visual material over a period of time will be pertinent to others contemplating its use in their own schools. A great deal of value can be derived from the attitudes displayed by comments of the school administrators of Arizona. The following comments were given in answer to the request for an expression of attitudes towards the visual instruction program:

Concerning expense

If films are rented the cost is too much for the amount of usage obtained, especially when not accompanied with the proper teaching materials. Films owned by the school are very desirable.

It is very valuable if it is used in the proper way. The expense is too great for a small school.

It is almost impossible to correlate films with the curriculum on a rental basis, and outright purchase of films seems prohibitive.

Cost too great for small schools to use properly. County film pool plan would greatly increase effectiveness of film teaching.

Poor service. Films in poor condition. The expense of rentals is too much to allow time for previews. I believe previewing is necessary for the teacher to be able to put across the lesson taught. A private library for films would be ideal, or a group of schools going together to form a library.

Concerning administration

Of great value if properly used. Without a planned program, of little value.

I believe as knowledge of how to use good films in school work increases, the value of the film usage will become great.

Too haphazard. Each school needs a director of visual aids. School rooms need facilities for showing.

Used properly, it is extremely valuable in making things seem more real to the pupils, but teachers should be careful not to make a "picture show" out of them.

Next in value to a good teacher.

One of the best teaching aids we could have providing they are used correctly.

Fine supplement in teaching method. May, however, be overdone.

Value is questionable, because of inadequate preparation of classes prior to showing, lack of teacher guidance material which should be furnished by film libraries well in advance of the showing of the film, and lastly, frequent lack of "follow through" after the showing. The foregoing is my opinion. If this condition is general, our teacher training institutions should see to it that their graduates are trained in the means of using visual education.

More planning by individual instructors.

Better visual education courses in training schools.

Must be correlated.

Too often pictures are used for entertainment instead of instruction and information.

Needs expansion.

There is a need for film-study guides adapted to various parts of courses of study where films are of special value.

Perhaps more care should be exercised in correlating or synchronizing the use of films with the instructor's teaching outline.

More experienced teachers to use the films.

It is hard to find out before showing the film whether it is a worthwhile film or not.

Very often the film is quite disappointing, as it does not show what we anticipated it would show.

Motion pictures are one of the most valuable aids we have. The necessity of booking films well in advance is the worst handicap. This tends to make schedules and programs inflexible.

Concerning films

Potentially, of great value, present pictures of limited value.

They have a decided place, but slides and other visual aids can be used to better advantage for classwork.

O. K. Would be much better if we had more good films well coordinated with the courses of study.

Degree of reception and retention is very high, but films must be kept up to date to maintain best results.

Very valuable. Many geography films are antiques.

Very good for supplementary material, but films are in many cases poorly organized for teaching purposes. I believe that films have a promising future for classroom purpose.

Good education, but involves much time. One must see too much unnecessary material and advertising to get one good point.

Need more and better sound films.

It is hard to get films for the covering of specific subjects, but of course they are very valuable.

More complete pictures -- quality of films available in Arizona is poor. Films have not had very good care.

We need newer and better films. We need more sound films.

Many of the films sent out by the University of Arizona are quite old. I have used them this year, however, because I felt that was the only way by which this state could build up a film library. We certainly need a great many more films than they have at present. Don't you feel that there is danger that teachers who have gotten just a smattering of the subject will maltreat it? "A little learning is a dangerous thing," and a misuse of visual aids will retard their acceptance by others.

Some films are too old for geography use.

Need sound pictures and colored pictures.

Many of the films are too old and no up-to-date. The children often get false ideas.

We need material that is more clearly explained and illustrated. Films are too often not up-to-date. I believe that sound will give the clearness of explanation that is so lacking with the average silent film.

Many of the University of Arizona's films are poor, old and silent.

We need more films to fit particular subject matter in our courses of study.

Concerning miscellaneous comments

Value in bringing outside world to pupils.

One of most effective methods of instruction.

Very much need for more facilities.

Supplements subject matter and creates interest in school subjects and safety education.

O.K. if students can be taught to regard films as educational advice and not entertainment as such.

I believe in motion pictures as visual aids to Education or I would not be using them. I sincerely hope, however, that teachers will not "go to seed" in this as they have in so many other lines -- "The project method" for example.

We find them a decided asset to our instructional program.

I believe motion pictures are taking an important place in education. Children can see the life in lands which they may never visit.

It would be interesting to test teaching results objectively with and without visual and sound equipment in Arizona.

Value has been overrated. Tests administered thirty days after showing of films indicate a minimum of retention of salient facts shown by the films.

Another point that need be remembered is that motion pictures are not the only important visual aid.

State department should have a circulating library available to the schools for a small fee (self supporting).

The weak spots are gradually being ironed out.

Service most valuable when film schedule can be adapted to home room problems and units of study.

Fourteen statements were similar in reporting the value and worthwhileness of the films if not overdone.

CHAPTER IV

SUMMARY AND RECOMMENDATIONS

The motion picture film was invented in 1889 and opened a field of industry which has developed with much rapidity. The dreams of first experimenters centered about its vast potential use as an educational device. For a number of reasons films were not put to that use at first. Instead, entertainment occupied the producers' efforts. However, with the advent of the 16 millimeter film and the interest of strictly educational film producers, the early dreams are beginning to take form in reality.

Causes for slow application of films to educational use are numerous. Among them are cost of equipment, insufficient satisfactory films, inexperience of teachers in operation, and the lack of knowledge concerning the value of films.

Federal government agencies led in producing and distributing educational films. Especially active has been the Department of Agriculture.

Distribution of films to schools became an important handicap. To assist in this matter a number of agencies took the responsibility. In 1936 there were 174 distributing agencies, centered primarily in federal government agencies, colleges and universities, and select commercial dealers.

In June, 1938, the Association of School Film Libraries was organized, a non-profit corporation established to bring about more effective distribution of motion pictures to American educational institutions.

In-service teachers had the opportunity of enrolling in audio-visual aids courses at 150 summer schools in the summer of 1940.

The Department of Visual Instruction was organized in Arizona in 1938 and has functioned for three years.

From the University of Arizona extension department a basic history of the development of motion picture usage in Arizona schools was obtained.

As early as 1919 four projectors had been installed in Arizona schools. The film library was established in 1920 with about 100 reels of 35 millimeter film borrowed from various sources. Those reels were primarily industrial in nature. Government Indian agencies were regular users of the films, for these schools were furnished with projectors. Many public schools had to use the facilities of theaters, clubs or churches.

The library grew gradually, although expression was made for more films and for a small budget. Schools began to install equipment. No charge was made for films, except for transportation. The library secured a portable machine which was loaned to nearby schools for showings.

In 1923 there were 75 more reels obtained from the Bureau of Commercial Economics and industrial sources. It was harder for the library to secure loan films. In 1924 there were 38 combination and 32 regular projectors installed in schools, and the following year the library started renting films. Since most schools had seen a number of older reels and the demand for those was small, some reels were taken from circulation. That year the library obtained the Chronicles of America Photoplays.

In 1929-1930 there were eight rental showings, and in 1934 the library bought 126 silent 16 millimeter subjects, mostly on geography, history, science and health. Thus began the transition to that size film from the more bulky and expensive 35 millimeter films. At that time 450 reels were available from the bureau. In 1936 all 35 millimeter films were discontinued. That year the library purchased 46 more reels of silent films and its first unit of 23 sound reels.

The final report from the library in 1940 listed 362 reels of silent 16 millimeter film and 163 reels of sound, a total of 525 reels. That year the library made shipments to 78 grammar schools, 15 high schools, 4 Indian schools and 4 universities.

The graphs showing the development of the number of shipments, reels and people viewing the films, reveal quite

regular movement except in a few cases. In 1924-1925 the number of shipments was high, probably because of the installation of so many new machines. The following year, simultaneously with the charging of rentals by the library, the number dropped again. However, the number of people was a good deal higher in 1925-1926, possibly because the schools were showing the films in their auditoriums to larger groups of students. The fact that the number of reels was higher in proportion to the number of shipments is possibly due to the use of the Chronicles of American Photoplays, which were new that year and which came in sets of more than one reel. Another possible cause was the use in auditoriums where more than one reel was used for an assembly.

Shipments stayed about the same until 1934, although the number of reels gradually increased and the number of students grew less. That was probably because the films were beginning to be used in classrooms or by classes and more films on a given subject caused orders for individual classes to be increased.

From 1934-1935 on the numbers of shipments, reels and people increased, because 16 millimeter films had replaced the larger films and because there was more information available to the teachers concerning the use of motion pictures in schools. The average number of

reels decreased, because the schools were ordering oftener on regular schedules.

It is to be noted that almost all the early users of films who quit using about 1930 were schools in the south and east sections of the state, nearer Tucson.

The heavy users of films throughout the life of the film library have been centered primarily in Tucson, Phoenix and the larger mining towns. Other schools were more or less irregular in usage.

The schools using films since 1934, when 16 millimeter films began being circulated, were scattered throughout the state. Mainly, however, those centered in the Salt River Valley, near Phoenix, and in the mining districts of northern Arizona.

Most of the Indian schools were heavy users of films until 1932. That was because the government furnished projectors and helped to carry on educational programs among the Indians. Those schools have begun only recently to purchase 16 millimeter projectors. Also, many of the films for their use are being distributed by the government agencies in Washington, D.C.

Supplementary data for the study were obtained from interviews with educators and visual equipment dealers. And some indication of film circulation from sources other than Arizona was obtained in correspondence with two

nearby libraries.

Results of the 81 percent reply to 105 questionnaires sent to public school officials of the state are summarized briefly:

Silent projectors	57
Sound projectors	<u>46</u>
Total	103*

*Three of which were 35 millimeter

Aside from the values of various makes of equipment, the fact that the Victor projectors total over half the number of machines owned by schools is perhaps caused by the concentration of sales in the hands of one Phoenix company which has carried on a state-wide campaign for visual education for a number of years. The Bell and Howell which was second in order, had not been under one sales agency until 1939. The other makes of machines still have no individual distributing and sales agencies.

A large percentage of the students of Arizona have projectors available for use, as shown by the figures 62,851 out of 88,075, or over seventy-one percent. In only three counties were there less than half the students who had machines available. Apache county had one machine owned by an Indian school of 14 average daily attendance. Pinal county had three machines located in two small towns,

which accounted for its low percentage. Santa Cruz, the smallest county in the state, had only two towns large enough to include in the survey. Neither reported a machine.

Nine schools, other than the university, owned films and each of those was limited to not more than six reels. That number is small, possibly because the film library has been able to serve the needs and because there has been no strong encouragement for private school ownership or organization of county pool libraries. Of the films used, over half of the schools combine their use for instructional and entertainment purposes.

Several of the small elementary schools near Phoenix reported the use of a fairly large number of films, because of the film circuit being applied there. Through the cooperation of county office films are ordered and relayed from one school to another every half day. Film subjects used in 1938-1939 ranged from 2 to 300. The total number was 3,049, making an average of 68 per school.

Because of the lack of definite information, the following reasons for the rating of the courses of study as indicated in Graph III are only probable:

The first four, geography, history, science and safety, were the basic films of the library, 126 reels being purchased as the first group in 1934.

Geography films were used most often, because the film library has more films available in that field than in any other.

History was placed second because the library obtained 47 reels of the excellent Chronicles of American Photoplays.

The last seven in order were there because the library has fewer films in those courses of study, and because there are fewer of those films available from most of the nearby libraries.

Agriculture films were used frequently at first because of their loans to the library by government sources. These sources have since been discontinued. That course was placed in seventh position, because the course is taught usually in high schools and the proportion of agricultural courses is low compared with other courses of study.

The University of California was second in providing schools with films, probably because of its organizing a branch library in Los Angeles.

The rather large number of films being used from the University of Colorado, 194 in all in 1940-1941, can probably be explained by the fact that that library has a low rental rate for all of its scenic and industrial films. The University of Arizona library has not obtained as many films in those fields.

The probable explanation for the Y.M.C.A. serving 78 exhibitors, a large proportion of the users, is the number of free films available and the comparatively low rates for full-feature entertainment films.

Recommendations

A summary of the interviews with educators and of the comments by the administrators leads to the following recommendations:

1. The teachers' colleges and the university should offer regular courses in audio-visual aids.
2. The State Department of Education should run a circulating library or the counties should operate county libraries.
3. The state department should supply films cheaply, do it quickly from a central location, take good care of films, furnish film guides and handbooks with complete descriptions of films, carry on a testing and research program, provide equipment recommendation service, and distribute type lesson units.
4. County and city school systems should provide supervisors and directors to help teachers administer the program.
5. Administrators should be encouraged to provide appropriations for more equipment, better room facilities, etc.

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APPENDIX

APPENDIX

Films in the University of Arizona film library
in January, 1940.

TABLE VIII

SILENT 16 MILLIMETER FILMS

No. of copies

Air fleet	5
Alaska	6
Alaskan Adventure	2
Anglers Idyl	2
Animal Life	3
Anne Learns About Ocean Liners #1	5
Anne Learns About Ocean Liners #2	4
Anne Learns About Cargo Boats	4
Anne Visits a Fish Harbor	3
Ants	7
Apple Blossom Time in Normandy	2
Argentine	4
The Arid Southwest	9
The Art of Spinning and Weaving	1
Atmospheric Pressure	5
Austria	2
Baby Songbirds at Mealtime	1
Balkans	3
Battuk of Sumatra	1
Beautiful Czechoslovakia	6
Behavior of Light	2
Beet and Cane Sugar	2
Bella Napoli	2
Benares	2
Bituminous Coal	3
Blood	4
Boats of Fishermen of Wapi	3
Body Framework	5
Daniel Boone	1
Boone Trail	2
Boulder Dam	7
Brazil I	4
Brazil II	3
Breathing	6
Bruges	1
Buenos Aires	1
Calcutta	3
Canoe Trails	4
Cape of Good Hope	1
Carbon — Oxygen Cycle	5

TABLE VIII (Con't).

	No. of copies
Care of Teeth	7
Cattle	3
Central America	1
Central Plains	3
Chemical Effects of Electricity	2
Children of Rumania	1
Chile	2
China I	3
China II	5
China III	3
Circulation	6
Citizen and His Government	3
Cleanliness -- Bathing	6
Cleanliness -- Clean Teeth	6
Cleanliness -- Hair and Face	8
Columbus	1
Common Salt	2
Continent of South America	1
Copper Leaching	1
Copper Mining I	3
Copper Mining II	3
Copper Mining III	3
Copper Refining	2
Copper Smelting	2
Cotton goods	2
Cotton Growing	3
Coyote	6
Crayfish	1
Cuba, Isle of Sugar	3
Cunard Oceanliners	2
Cycle of Erosion	1
Daily Life of the Egyptians I	3
Daily Life of the Egyptians II	2
Death Valley	2
Declaration of Independence	2
Denmark	3
Development of a Bird Embryo	2
Development of Transportation	9
Digestion	8
Disease Carriers	5
Dixie	1
Drive Is On	2
Dutch East Indies	1
Dynamic New York	3
Earthquakes	1
East Indian Islands	2
Egypt	1
Enemy of the Forest	3
Energy and Transportation	4
England I	2
England II	2

TABLE VIII (Con't)

	No. of copies
Ethiopia	1
Eve of the Revolution	3
Exercise	3
Farmers of Formosa	1
Felt	1
Finland	4
Fire Prevention	2
Fire Protection	1
Fire Safety	4
Fish and Bear Tales	3
Fish and Fishing	2
Flowers at Work	3
Food	5
Food and Growth	4
Forests and Streams	2
Forests and People	3
Forming of Soil	3
Forming of Volcanoes	2
Fortune Builders	1
Four Stroke Cycle	2
Benjamin Franklin	3
From Bahamas	1
From Catch to Can	5
From Trees to Newspaper	5
From Wheat to Bread	1
Frontier Women	2
Frontiers of the North	1
Fungus Plants	3
Game Birds	2
Gateway to the West	2
General Health Habits	6
Getting Acquainted with Bacteria	5
Glimpses of Greenland	3
Gold	1
Golden Gate	3
Good Foods -- Bread and Cereals	1
Good Water	4
Good Fruits	5
Grass	2
Great Plains	3
Guatemala	2
Guild Cities of Belgium	2
Alexander Hamilton	1
Harvesting the Deep	3
Harvesting the Sugar Maple	3
Hats Off	7
Hawaiian Islands	1
Heat and Light	2
Historical Rhineland	3

TABLE VIII (Con't)

	No. of copies
Holland	3
Honeymakers	4
Hoofs and Horns	1
Horse Sense in Horse Power	10
Houses of the Tropics	3
How Forests Serve	3
How Nature Treats Animals	3
Hungary	2
Ikpuk	6
Immigrants to the United States	7
Indians of the Plains	1
Inner Tube	1
In Old Granada	2
Interdependence	4
Iron Ore to Pig Iron	5
Irrigation	6
Isles of Romance	2
Isles of Sunshine	1
Japan I	2
Japan II	2
Japan III	2
Jamestown	1
Thomas Jefferson	1
Kashmir, Old and New	1
Licking Horse Trail	2
Kruger Game Reserve	3
Land of Evangeline	1
Leather	1
Life in the Sahara	6
Abe Lincoln I	4
Abe Lincoln II	5
Little Dutch Tulip Girl	3
Little Indian Weaver	5
Little Swiss Woodcarver	3
Living Cells	2
London	2
Lumbering in the Northwest	6
Malays of Sumatra	1
Manchukuo	1
Maritime Province	1
Masai	2
Meat Packing	3
Mexico I	5
M exico II	1
Middle Atlantic States	2
Mining and Smelting of Copper	1
Modern Commerce	5
Mohawk Valley	1
Mold and Yeast	2
Molecular Theory	2
Molluscs	1

TABLE VIII (Con't)

	No. of copies
Monarchs of the Plains	1
Money Makers of India	3
Mongols of Central Asia	5
Muscles	4
'Neath Poland's Harvest Skies	2
New England States	1
New South	4
New York Water Supply	2
Nimrods in Duckland	2
Nitrogen Cycle	6
Nomads of the Sea	1
Normandy and Brittany	3
Norway	3
Oberammergau	1
Old South	7
Optical Instruments	2
Oregon Country	6
Our Earth	5
Overland to California	5
Oxidation and Reduction	2
Oysters	1
Pacific Mountains and Lowlands	1
Palestine	2
Palma de Majorca	1
Panama Canal	4
Paris the Beautiful	3
People in the Arctic	5
People in the Valleys	3
People in the Desert	6
People on the Equator	5
People in the Plains	2
People Who Live Near Industry	4
People in the Mountains	4
People by the Sea	5
Peru	3
Philippine Islands	5
Pig Iron to Steel	5
Pilgrims	2
Plant Growth	4
Poland	3
Pasture	9
Prairie Dogs and Beavers	6
Primitive Indians of the Peruvian Desert	3
Producing Crude Oil	3
Province of Quebec	1
Pueblo Dwellers	3
Puerto Rico	1
Puritans	1
Rattlesnake Eating a Rabbit	3
Refining Crude Oil	3
Reforestration	3

TABLE VIII (Con't)

No. of copies

Ride 'em Cowboy	8
Rio de Janeiro	1
Rio Grande	2
Rocky Mountains	2
Rome Eternal	6
Roots of Plants	3
Rubber	1
Russia I	4
Russia II	3
Russia III	3
Russia IV	1
Seed Dispersal	4
Seeing Salem	7
Seeking Steelheads	2
Serbia	1
Siberia I	5
Siberia II	5
Simple Mechanics	1
Skin	5
Sky	2
Snowbound Pyrenees	1
Soap	6
Solar Eclipse	1
Southern States	1
Speaking of Safety	9
Steam Power	2
Story of the Airship	3
Story of Salmon	3
Story of the Star Spangled Banner	4
Story of the Tire	3
Peter Styvesant	2
Sulphur	3
Sweden	2
Switzerland I	2
Switzerland II	3
Tasmania	2
Tigers of the North	2
Tiny Water Animals	2
Toledo and Segovia	2
Transvaal's Cities	1
Trip Thru Germany	3
Turkey I	1
Turkey II	1
U.S. Marines in China	2
U.S. Marines in the West Indies	2
Venice	2
Vincennes	1
Viperine Serpents	2

TABLE VIII (Con't)

No. of copies

Wanderers of the Arabian Desert	5
Washington, City	5
Geo. Washington I	5
Geo. Washington II	5
Geo. Washington III	8
Geo. Washington IV	6
Water Cycle	5
Water Power	4
Webster, Daniel	1
Wee Anne and the Snowman	4
Wee Anne goes Sailing	3
Wee Anne Sees Indians	9
Wee Anne Visits the Farm	9
Wee Anne Visits the Zoo	5
Wee Anne and Christmas	6
Wee Anne with Dog Sandy	5
Wee Scotch Piper	2
Western Plateaus	1
Wheat	2
When Guide Meets Guide	3
When Winter Comes	1
Where Snowtime is Joytime	5
Where Winter Sport is King	4
Winter Witchery of Niagara	3
With Dog Team and Snowshoes	2
Wolfe and Montcalm	2
Women workers of Ceylon	1
Wonders of the Yellowstone	2
Work of Rivers	3
Work of the Waves	1
Work of the Wind	1
Yesterday Lives Again	2
Yoho	1
Yorktown	1
Yosemite	2
Zulus	1

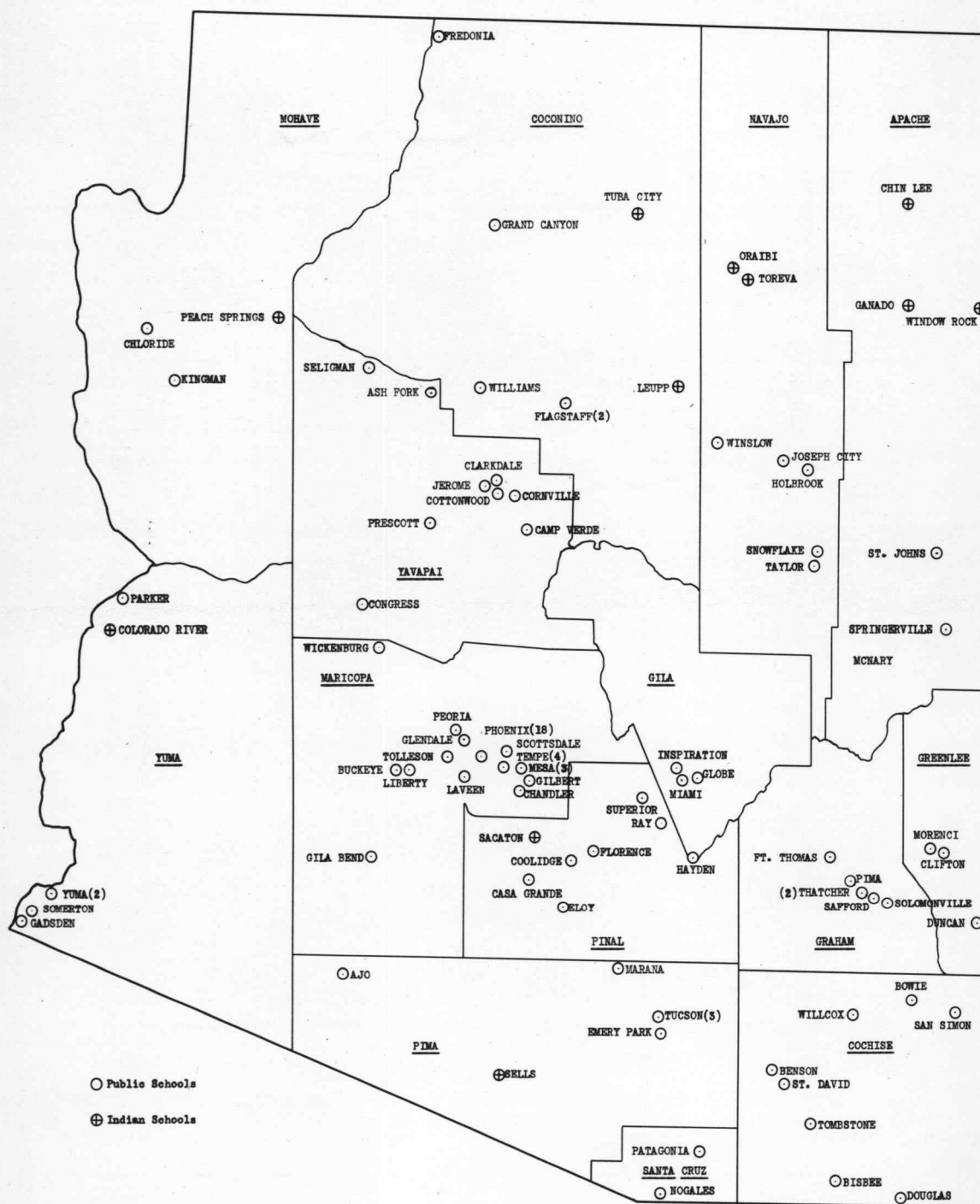
16 Millimeter Sound Films

ABC of Forestry	4
Airliner	7
Animals of the Zoo	8
Aphids	1

TABLE VIII (Con't)

	No. of copies
Beach and Sea Animals	5
Beetles	2
Brass Choir	2
Butterflies	3
Commerce Around the Coffee Cup	5
Earth in Motion	2
Frog	4
Fundamentals of Acoustics	4
Geological Work of Ice	1
Grassland	2
Ground Water	2
Habana	2
Housefly	9
In Maori Land	1
I Pledge My Heart	1
Leaves	4
Life in Lapland	3
Moon	3
Mountain Building	1
Muddy Waters	4
Nat. Poultry Improvement Plan	1
Navajo Children	7
Nervous System	3
Nightingales	2
Percussion Group	2
Pond Insects	2
Reactions in Plants	1
Solar Family	3
Sound Waves	5
Spiders	1
Spirit of the Plains	9
Stop Forest Fires	3
String Choir	4
Southern Crossways	3
Symphony Orchestra	5
Taj Mahal	2
Territorial Expansion	2
Thrushes and Relatives	2
Tree of Life	3
Volcanoes in Action	4
Wee Wee Mannie	2
Winter Wonderland	4
Woodwind Choir	4
Work of the Atmosphere	2
You Can't Get Away With It	7

SCHOOL SYSTEMS INCLUDED IN THE STUDY





State of Arizona
Department of Public Instruction

H. E. HENDRIX, SUPERINTENDENT

Phoenix

April 9, 1940.

J. A. RIGGINS
STATISTICIAN

M. J. HURLEY
CERTIFICATION

HARRY H. SCALES
DIRECTOR OF RESEARCH

J. MORRIS RICHARDS
TESTS AND MEASUREMENTS

C. LOUISE BOENRINGER
DIRECTOR OF CURRICULUM

Mr. Bernard R. Shaner,
Prescott Public Schools,
Prescott, Arizona.

Dear Mr. Shaner:

The questionnaire which you submitted for examination to the State Department of Education is to my mind a questionnaire in the results of which the schools would profit distinctly.

I therefore happily give you the privilege of making a statement or including this letter as an endorsement of your questionnaire.

Very cordially yours,

H. E. HENDRIX, Superintendent
of Public Instruction

BEH:EM

LETTER IIThe Personal Letter

To secure material needed in preparation of a thesis for my Master's degree I am writing you this letter and am asking your cooperation and help by filling in the blanks on the enclosed one-page questionnaire and returning it to me.

My thesis problem is to prepare a history of the use of motion pictures in the schools of Arizona. Final reports will show the usage up to the school year 1938-39. After tabulation these reports will be available through various sources. I have a statement from the State Superintendent of Public Instruction that these records will be of distinct value to his office as well as to the school administrators of the state.

If there is a member of your personnel who is more closely associated with the visual aids department than you, he may furnish the desired data. If in answering the items you need more space, use the reverse side of the questionnaire sheet. No names will be used in connection with the reports.

Your cooperation in supplying me with this material will be appreciated.

Very truly yours,

Bernard R. Shaner

THE QUESTIONNAIRE

1. If you do not use motion pictures in your schools check here _____ and return the questionnaire.
2. State the number and model of each type of silent projector:

(a) Ampro _____	(d) Holmes _____
(b) Bell & Howell _____	(e) Victor _____
(c) DeVry _____	(f) Others _____
3. State the number and model of each type of sound projector:

(a) Ampro _____	(d) Holmes _____
(b) Bell & Howell _____	(e) Victor _____
(c) DeVry _____	(f) Others _____
4. Approximately what year did your schools start using films? _____
5. If you own any films, state the number. _____
6. Do you use films for: instructional use only _____
 (check one) recreational and enter- _____
 tainment only _____
 instructional and _____
 recreational _____
7. State the approximate number of film subjects used in 1938-1939. _____
8. Using numbers 1, 2, 3, etc., check the courses of study in order of number of films used. (no. 1 representing largest number. Leave blank if quite a negligible number is used.)

Agriculture _____	Industrial Arts _____
Art _____	Music _____
English _____	Physical Educ. _____
Geography _____	Safety Educ. _____
History _____	Science _____
Home Economics _____	Social Studies _____
9. As in number 8, check film libraries which supply your films.

Univ. of Ariz. _____	Y.M.C.A. _____
Univ. of Calif. _____	Industrials _____
Univ. of Colo. _____	Others _____

10. Check the method of financing your program.

Board of Trustees _____	School funds _____
Public showings _____	Others _____
Student activity _____	_____

11. State briefly your attitude as to the value of motion picture usage in Arizona schools. _____

12. Any other comments (faults, needs, etc.) _____