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COLLEGE COLLECTION

A SURVEY OF AUDIO-VISUAL AID RESOURCES AS USED IN FIFTEEN  
GUILFORD COUNTY HIGH SCHOOLS DURING 1946-1947

by

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✓  
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## CHAPTER I

### THE PROBLEM AND THE LITERATURE

#### Introduction

Methods of presenting various kinds of educational materials to students have undergone many changes in recent years. That form of instruction in which the teacher presented most of the information verbally, and often presented it without much concern or interest in her pupils, has gradually given way to more stimulating and efficient methods of instruction. These include the use of audio-visual aids which enlist the sensory facilities of sight and hearing to make a more adequate interpretation of verbal communication. This new type of instruction is the result of constant demands by the public for greater efficiency in our school systems. More funds for instruction are made available now than in previous years and educators have been told to show improved results.

Education is the continuous process whereby the functioning of the human mind is progressively improved, and is the total result of reaction by the human brain to sensory experiences. Anything that facilitates the acquisition of knowledge is desirable. In his Audio-Visual Methods in Teaching, Dale says:

Education should be the rich, active, personal, and adventuresome thing it is when a father teaches his son how to fish, or a mother teaches her daughter how to bake a cake, or a scout leader explains to youngsters how to find their way in the woods without a compass, or a dramatic teacher coaches a play. For in all these situations learning has motivation, clarity, and use to such a degree that permanence can almost be taken for granted. It has, in addition, a train of other qualities - such as pleasurable, emotional gratification, and a sense of

personal accomplishment - which strongly reinforce the learning.<sup>1</sup>

Through the years educators, and people interested in education, have been trying to find new and better ways of imparting knowledge. Many methods have been tried but none has been found that is entirely satisfactory. The increasing interest in audio-visual aids as a means of instruction has brought from many people a request, first to test their use in the public schools, and then to evaluate them on the basis of the results obtained. The successful use of audio-visual techniques by the educators enlisted in the armed services, and the remarkable results obtained in the classrooms throughout the country during the last decade have focused the attention of the public on this method of instruction.

Nelson L. Greene, Editor-in-Chief of Educational Screen, says:

Formal education has always been a slow-moving process. Leisurely pace has been one of its proudest traditions, and there is basis for the pride. Down through the centuries and up to the twentieth, formal education has consisted of absorption and meditation, concerned more with the abstract than the concrete. The primary end sought was the attainment of an able and cultured mind, not the achievement of any tangible result of product. Time is the essence of such a process, time to think. The longer the process the finer the outcome.

At the turn of the century marked transformations in the world way of life were in full swing. Advances in communication and transportation were taking place, increase in material production in staggering amounts was bringing about a vastly more complex, efficient and comfortable way of life for all mankind. The older education, at its established pace, could not have kept the nation even conscious of this new day and age.

But at the turn of the century also came so-called visual education, the priceless means of speeding, expanding and enriching educational procedure, so as to keep man in touch with his own achievements, in harmony with his fellows in all lands, fully aware, in short, of the marvel and magnitude of twentieth century progress.

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1. Edgar Dale, Audio-Visual Methods in Teaching. New York: Dryden Press, 1936. p. 18.



The picture opened the way for nearly instantaneous communication between informant and informed, between builder and buyer, between teacher and pupil. Commerce and industry recognized it promptly as a supplementary tool in their great task of production and merchandising. Later haltingly and gradually, education began to use the picture but without recognizing it, even yet, as the primary tool for the great task in lower education. Slowly, over three decades, the educational field achieved visual equipment--some tens of thousands of stereopticons and motion picture projectors. The leisurely pace still functioned. What moves slowly can change only slowly. Then came Pearl Harbor.

The country faced the greatest educational challenge of all time. The educational meander had to become a torrent. Millions must be taught countless things in the briefest possible time. Speed and effectiveness must supplant deliberation and routine. And the means to that end. The picture. The nation seized upon it unanimously. The screen began its mighty work for Government, Army, Navy, Business, School and Community. Visual teaching seethes today. Production, distribution, projection of slides, film-slides and motion pictures are many fold greater than ever before. Yet the full possibilities are still choked by lack of equipment that could have been ready.

But we are catching up fast. Projectors are keeping hot throughout the land. Pictures are pouring from the studios in an unprecedented stream. An awakened educational field is digging more and wider and deeper channels to bring to the eyes of a nation what it needs to see and know in such times as these. Thousands of schools are doing it now for themselves and their communities. Many more are starting. It will be a record in the swift enlightenment of a nation. The job will be done and the picture will have done it.<sup>2</sup>

#### Importance of the Problem

The audio-visual aid method of instruction is not new. In fact, it is one of the oldest methods of instruction, going back to the time when people relied upon sign language as a means of communication. McKown and Roberts say: "Visual aids are probably the oldest method of conveying ideas, and even in formalized education they have been used for centuries."<sup>3</sup>

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2. Nelson L. Greene, "The Leisurely Pace in Education," Educational Screen, XXI (November 1942), 339.

3. Harry C. McKown and Alvin B. Roberts, Audio-Visual Aids to Instruction. New York: McGraw-Hill, 1932. p. 4.

They are the forerunners of our modern blackboards, bulletin boards, school museums, and sand tables. Soon after the art of printing was perfected, books appeared with printed pictures that they might better convey the ideas of the writer to the mind of the reader.

Colonel M. E. Gillette, in charge of the production of visual aids for army training, made the following public statement: "These officers--whose business it is to know--assure me that training films, used intelligently in combination with normal methods, can cut the time for training up to forty percent in some cases."<sup>4</sup>

According to a recent report in the Research Bulletin of the National Educational Association, no phase of the school program can claim more widespread interest and attention than the audio-visual procedures in education. The rapid strides made before the war, especially in the development and use of educational motion pictures and radio, were producing a greater interest in audio-visual materials and techniques. More recently, however, the extensive use of audio-visual procedures by leading educators who were temporarily enlisted in the army and navy and given a free hand in developing effective wartime educational programs, has influenced the public to demand their use in schools. Teaching the way the armed forces were taught, has been urged upon the schools too often for educators to ignore these demands.<sup>5</sup>

Until recent years, although they increasingly realized the

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4. H. Arnold Perry, Some Questions and Answers on Auditory and Visual Aids. Raleigh, N. C.: State Department of Public Instruction, 1946. p. 1.

5. National Education Association. Research Division, "Audio-Visual Instruction in Current Educational Plans," Research Bulletin, XXIV (December 1946), 133.

importance of visual aids as an effective method of instruction, educators, in too many cases, were not given sufficient funds to provide a good audio-visual aid program. During the war equipment was expensive and often unobtainable. But at present increased funds are available, and manufacturers are able to supply the equipment to meet most of the needs of the schools.

#### Statement of the Problem

As many school minded people are interested in the audio-visual aid program in the Guilford County schools, this study was made to determine the kind and extent of this program as it is now conducted.

The study is a survey of the audio-visual aids used in 1946-1947 in fifteen high schools of Guilford County, North Carolina, the purpose of which is:

1. To determine the number and kinds of audio-visual aids used in each of the several secondary schools of the county.
2. To compare the audio-visual aids used in each school with their average use in the county as a unit, and with the aids recommended for use by a committee of experts.
3. To formulate conclusions and make recommendations, based upon the findings of this study, for improving the audio-visual educational program in the county.

#### Delimitation of the Problem

The study was confined to the fifteen rural, white high schools in Guilford County, which had a total enrollment of 2383 students. These schools had enrollments ranging from 100 students in the McLeansville School to 317 students in the Rankin School. As the cities of Greensboro

and High Point, both located in Guilford County, with populations in excess of 40,000 people, have schools with problems different from those in the rural schools, they were not included in this study.

Guilford County is located in the Piedmont section of North Carolina, slightly north of the geographical center of the state. Based upon the amount of taxes paid in 1936, it is the wealthiest county in the state. With its well balanced agricultural program, its large number of hosiery, cotton, and silk mills, its many furniture factories, Guilford County is able to finance any school program which its officials consider necessary.

Any reference to audio-visual aids as a part of the instructional program calls to mind a vast array of materials and equipment which might be, and are used to some extent for instructional purposes. Not all of these materials, however, will be discussed in this report. Such items as blackboards and bulletin boards, which are a part of the equipment of every school, will require no further discussion. Other items which will receive no further mention are: specimens, replicas, stereographs, illustrations, cartoons, radios, and television.

The audio-visual aids considered in this survey are those principally used in the county high schools. They are, with the exception of trips and excursions, well adapted to classroom use and can be used with large classes. They are: silent and sound films, film strips, glass slides, phonograph records, models, charts, flat pictures, and field trips and excursions.

#### Definition of Terms

That visual materials in education have been used in teaching for a very long time, is more readily understood if the term "Audio-Visual Aids"

is defined. Various terms such as visual aids, visual instruction, and perceptual aids to learning are used to designate the same type of aids used in instruction. Hoban, Hoban and Zisman in Visualizing the Curriculum, regard a visual aid as:

. . . any picture, model, object, or device which provides concrete visual experience to the learner for the purpose of (1) introducing, building up, enriching, or clarifying abstract concepts, (2) developing desirable attitudes, and (3) stimulating further activity on the part of the learner. For convenience these various visual aids have been classified as (a) the school journey, (b) museum material, (c) motion pictures, (d) still pictures, (e) graphic materials.<sup>6</sup>

According to Dorris: "Visual instruction simply means the presentation of knowledge to be gained through the seeing experience."<sup>7</sup> Roberts defines "Visual education as a method of imparting information which is based upon the psychological principle that one has a better conception of the thing he sees than of the thing he reads about or hears discussed."<sup>8</sup> Dent says that visual-sensory aids are "all materials used in the classroom, or in other teaching situations, to facilitate the understanding of the written or spoken word."<sup>9</sup>

#### Review of Related Studies

Many theses have been written on the subject of audio-visual education but none was found closely related to this problem. However, in

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6. Charles S. Hoban and others, Visualizing the Curriculum. New York: The Cordon Company, 1937. p. 9.

7. A. V. Dorris, Visual Instruction in the Public Schools. Boston: Ginn, 1928. p. 6.

8. A. B. Roberts, "An Introduction to Visual Aids." School Activities, X (January 1939), 212.

9. E. C. Dent, Audio-Visual Handbook. Revised Edition. New York: The Society for Visual Education, 1939. p. 1.

1939, the State Department of Education of North Carolina, under the direction of Doctor H. Arnold Perry, reported a remarkable increase in audio-visual equipment in the schools of North Carolina during the three year period from 1936 to 1939. An increase from thirty-nine to 202 motion picture projectors was reported. This represents a gain of 418 per cent. In this period the percentage of increase in the number of radios was 169 per cent; in phonographs, 166 per cent; and lantern slide projectors, 100 per cent. From the report<sup>10</sup> it will be observed that during this three year period, there was a rapid increase in the use of audio-visual aid equipment in North Carolina.

The December 1946 issue of the Research Bulletin of the National Education Association reports the results of a questionnaire inquiry made to determine the status of "audio-visual education in the city school systems of the United States." In this survey questionnaires were sent to approximately 3700 school systems in cities with populations above 2,500. According to the report 65 per cent of the larger as compared with 22 per cent of the smaller cities returned the questionnaire.

Approximately 80 per cent of the cities in the United States of over 100,000 population have special audio-visual departments. Fewer than 40 per cent of the cities with from 30,000 to 100,000 population reported that they maintained such special departments. Less than 10 per cent of the cities in the smallest class has yet instituted audio-visual departments. The general trend of the report indicates that extensive and intelligent use of audio-visual instructional materials is much more likely

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10. H. Arnold Perry, "Implications of Increase of Audio-Visual Equipment," North Carolina Education, VI (December 1939), 127.

to be made when there is some kind of special organization which attends to such matters, than when no systematic plans are made.

A rather clear indication was given in the report that educators feel that the audio-visual instructional material programs now in operation are inadequate. Three-fourths of the cities reporting indicated their current methods of selecting, utilizing, and administering audio-visual aids were not satisfactory. Less than one-half of one per cent reported that they had overextended themselves.<sup>11</sup>

A nation-wide survey conducted in 1936 by the United States Office of Education with the cooperation of the American Council on Education was made to determine the number and kinds of visual aids used in the various schools, the extent of their use, and the way many were being used throughout the country. The schools which responded to the questionnaire were classified according to the number of students enrolled. The results of this survey revealed the following: The most frequently used visual aids in the order of the frequency of their use were: wall maps, charts and graphs, posters and cartoons, mounted pictures, objects, specimens and models, lantern slides, motion pictures, stereographs, film strips, and still films. More use of visual aids was made in the large schools than in the small schools, especially in the use of aids requiring mechanical equipment. In the large systems the aids were used more than three times as much as in the small systems. As the size of the school increased there was a steady increase in the use of every type of visual aid. Often they were used nearly three and one-half times as much in the large school

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11. National Education Association. Research Division, "Audio-Visual Education in City School Systems," Research Bulletin, XXIV (December 1946), 131-170.

systems as in the small systems. Pictorial materials, on the other hand, were used in only about twenty-five per cent more of the large than small systems. As the size of the school increased, there was a steady increase in the use of every type of aid included in the survey. There was a gradual increase in the use of the aids from the primary grades through the junior high school. There was a slight reduction in the use of visual aids in the senior high school. Out of every thousand schools, three and five-tenths per cent have either part or full time directors of visual education.<sup>12</sup>

C. L. Bard made a study of the administration of visual aids in the secondary schools of Ohio early in the last decade. The returns from a questionnaire sent out by him revealed the following: In frequency of showing, general educational films lead, followed by specific educational films, entertainment films, and films used which would develop an appreciation for good pictures. The films were shown most often to the whole school and to special classes; and the time for showing the pictures was given in this order of preference: a definite period each week, sporadic periods, and a schedule meeting class needs. Only a few city schools devote more than one hundred and fifty minutes each week to motion pictures. Most of the other schools reported that they used only thirty minutes per week. Lesson plans which accompany the films were used most often by teachers to prepare themselves to use the picture as a teaching device. Some form of preparation, ranging from fifteen minutes to sixty minutes was required on the part of the student in slightly more than two-

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12. Cline M. Koon, School Use of Visual Aids, United States Office of Education Bulletin, 1938, No. 4. Washington, D. C.: Government Printing Office, 1938. p. 2.



thirds of the cases. Methods given by them for explaining the pictures were: a general explanation before showing, a lecture during the showing, and textbook correlation. Most of the schools used some discussion, a discussion of fifteen minutes following the showing being the time used in most schools. In only a few of the schools was part of the final examination or final grade based upon the pictures shown during the term.<sup>13</sup>

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13. Edgar Dale and others, Motion Pictures in Education. New York: Wilson, 1937. pp. 183-184.

## CHAPTER II

### PROCEDURE

#### Introduction

The use of audio-visual aids in teaching received a great stimulus during the war. Schools have been quick to accept the results, and new procedures in teaching are now being used. Hollinger says, "In good schools everywhere there are evidences of alert senses quickening the mental processes. The formal textbook assignments and lectures are giving way to situations."<sup>1</sup> According to H. M. Barr, writing in the Educational Screen:

The audio-visual approach is the most promising of all educational techniques available to the classroom teachers. If properly directed, it does have the capacity to bring to our young people as they mature, a realistic, and much more easily understood picture of all phases of our civilization - its geography, its population, its technology, its ecology, its racial differences, its achievements, and its failures. It can really bring before the physical eye and, in time the mind's eye, the infinitely varied pattern of life in all its manifestations. If designed to that end, it can do more to socialize the individual than all the sermons and all the textbooks in the world. It can do this because the picture has a way of finding a welcome reception in the human mind and heart which the word does not.<sup>2</sup>

In the past schools found difficulty in providing situations and experiences with sufficient sense-data. With the advent of new devices teachers and pupils find more challenging situations. Lantern slides, motion pictures, film strips, phonograph records, models, charts, and

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1. John A. Hollinger, "Perceptual Learning," Educational Screen, XIX (February 1940), 49.

2. H. M. Barr, "Means---Not Ends," Educational Screen, XXVI (March 1947), 142.

trips and excursions may be used by every teacher. If these aids are to be used effectively to supplement teaching in the high school subjects, certain schedules and certain equipment must be provided in the schools.

#### Method of Collecting Data

To secure the information upon which this report was based, three methods of collecting the data were employed. Briefly stated they are:

First, a report form listing the enrollment and subjects taught in Guilford County high schools was prepared for each high school in the county.

Second, a questionnaire, requesting the number of audio-visual aids recommended for use in certain areas was sent to a selected group of superintendents, principals and teachers.

Third, a second questionnaire requesting a report on the number of audio-visual aids used in various subject fields during 1946-1947 was sent to principals in Guilford County Schools. The replies from these questionnaires were analyzed and tabulated.

#### Gathering the Data

##### Construction of the Report Form

The first step in the collection of information for this study was the preparation of a report form<sup>3</sup> for each high school in the county, which listed the enrollment and the subjects taught in that school. The information necessary for the construction of this form was secured from the Principal's Annual High School Reports for 1946-1947, filed in the County Superintendent's Office in Greensboro. The report form included

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3. A copy of the report form will be found in Appendix A.

those subject offered in 1946-1947 and these were the only subjects considered in this study.

#### Construction and Analysis of the Questionnaires

Questionnaire I.--To determine the number of audio-visual aids that should be used in modern high school courses, the following method was used: First a preliminary questionnaire<sup>4</sup> was prepared and sent to a representative group of college teachers, county superintendents, high school principals and teachers with a request that it be evaluated, and changed if necessary, to supply more nearly the information needed. With the suggested changes taken into consideration, the questionnaire in its final form was prepared in this manner: All subjects offered in high school were arranged in twelve fields of instruction as follows:

1. English, including literature, reading and dramatics.
2. Mathematics, including arithmetic, algebra and geometry.
3. History, including civics, geography, economics and sociology.
4. Science, including general science, biology, physics and chemistry.
5. Physical Education, including health and safety.
6. Foreign Languages, including French, Spanish and Latin.
7. Art, including music.
8. Agriculture.
9. Home Economics.
10. Vocational Shop, including industrial art and diversified occupations.
11. General Business, including typing, bookkeeping and shorthand.

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<sup>4</sup>. A copy of Questionnaire I will be found in Appendix B.

12. Salesmanship, including business correspondence and business law.

Hereafter in this thesis the first word in each of the twelve fields will be used to represent all the studies in that field. Following the list of subjects was a list of the audio-visual aids included in this study. They were: silent and sound films, film strips, glass slides, phonograph records, models, charts, flat pictures, field trips and excursions, and maps and globes.

This revised questionnaire<sup>5</sup> was sent to sixty superintendents, principals and teachers requesting the recipient, first to check his special field of instruction, that is the subjects which he taught, or with which he was familiar; and then to indicate the number of the various audio-visual aids which he thought should be used in this field of instruction during one year. Fifty-two questionnaires were returned. The list of those who returned the questionnaires includes eleven college professors and heads of departments, two county superintendents, twenty school principals and nineteen teachers.

All superintendents, principals and teachers who returned questionnaires are well qualified to pass expert opinion on the use of audio-visual aids in high school subjects as they are successful administrators and teachers, therefore, their opinions concerning the audio-visual aids which a high school should use in each of the twelve different fields of instruction were accepted and are known as the recommendation of the committee of experts.

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5. A copy of the revised questionnaire will be found in Appendix C.

6. For personnel of committee of experts, see Appendix D.

The responses from the questionnaire were tabulated and are presented in Table I.

TABLE I  
AUDIO-VISUAL AIDS NEEDED IN TWELVE CURRICULUM FIELDS  
AS RECOMMENDED BY A COMMITTEE OF EXPERTS

Audio- Visual Aid	Curriculum field														
	English	Mathematics	History	Science	Education	Physical	Language	Foreign	Music	Art	Agriculture	Economics	Home	Vocational Shop	General Business
Sound and silent films	20	7	14	30	19	7	9	15	18	7	14	7	14	7	
Film strips	21	12	17	33	20	9	14	18	27	5	20	7	20	7	
Glass slides	10	6	9	61	18	1	37	41	63	50	37	50	37	50	
Phonograph records	36	1	10	3	18	14	112	0	2	0	26	2	26	2	
Models	1	13	2	14	33	0	1	4	5	6	1	0	1	0	
Charts	6	38	27	57	52	2	10	50	22	37	14	5	14	5	
Flat pictures	122	23	65	148	82	22	70	37	170	25	21	5	21	5	
Trips and excursions	5	4	7	14	7	1	6	17	17	1	4	1	4	1	
Maps and globes				40											

Analysis of Questionnaire I.—According to the recommendation of the committee of experts the following audio-visual aids should be used in each of the following subjects during one school year:

English: twenty motion picture films, twenty-one film strips, ten glass slides, thirty-six phonograph records, one model, six charts, 122 flat pictures, five field trips.

Mathematics: seven motion picture films, twelve film strips, six glass slides, one phonograph record, thirteen models, thirty-eight charts, twenty-three flat pictures, four field trips.

History: fourteen motion picture films, seventeen film strips, nine glass slides, ten phonograph records, two models, twenty-seven charts, sixty-five flat pictures, seven field trips, forty maps and globes.

Science: thirty motion picture films, thirty-three film strips, sixty-one glass slides, three phonograph records, fourteen models, fifty-seven charts, 148 flat pictures, fourteen field trips.

Physical Education: nineteen motion picture films, twenty film strips, eighteen glass slides, eighteen phonograph records, thirty-three models, fifty-two charts, eighty-two flat pictures, seven field trips.

Foreign Languages: seven motion picture films, nine film strips, one glass slide, fourteen phonograph records, two charts, twenty-two flat pictures, one field trip.

Art: nine motion picture films, fourteen film strips, thirty-seven glass slides, 112 phonograph records, one model, ten charts, seventy flat pictures, six field trips.

Agriculture: fifteen motion picture films, eighteen film strips, forty-one glass slides, four models, fifty charts, thirty-seven flat pictures, seventeen field trips.

Home Economics: eighteen motion picture films, twenty-seven film strips, sixty-three glass slides, two phonograph records, five models, twenty-two charts, 170 flat pictures, seventeen field trips.

Vocational Shop: seven motion picture films, five film strips, fifty glass slides, six models, thirty-seven charts, twenty-five flat pictures, one field trip.

General Business: fourteen motion picture films, twenty film strips, thirty-seven glass slides, twenty-six phonograph records, one model, fourteen charts, twenty-one flat pictures, four field trips.

Salesmanship: seven motion picture films, seven film strips, fifty glass slides, two phonograph records, five charts, five flat pictures, one field trip.

Questionnaire II.—To determine the number of audio-visual aids used in the high schools of Guilford County, a second questionnaire was prepared and sent to each high school principal in the county. This questionnaire requested the principal to give the actual number, or a close approximation of the number of each of the audio-visual aids used in each of the twelve subject fields in his high school during the year 1946-1947. Maps and globes, for use in history, were also listed. All questionnaires sent to the fifteen county principals were returned.<sup>7</sup> The data was tabulated and is shown in Table II.

TABLE II  
AVERAGE USE OF AUDIO-VISUAL AIDS IN TWELVE CURRICULUM FIELDS  
AS MADE BY GUILFORD COUNTY HIGH SCHOOLS  
IN 1946-1947

Audio- Visual Aid	Curriculum field														
	English	Mathematics	History	Science	Physical Education	Language	Foreign	Music	Art	Agriculture	Economics	Home Shop	Business Vocational	General	Salesmanship
Sound and silent films	6	1	11	15	6	0	2	20	9	2	1	0	0	0	0
Film strips	6	1	6	8	4	0	0	17	2	0	0	0	0	0	0
Glass slides	2	0	3	18	1	0	0	31	1	0	0	0	0	0	0
Phonograph records	6	0	1	0	6	1	8	0	0	0	1	0	0	0	0
Models	0	1	1	6	0	0	9	4	1	0	0	0	0	0	0
Charts	7	4	18	23	11	6	9	34	18	0	3	0	0	0	0
Flat pictures	26	3	21	26	14	12	18	53	79	0	14	25	0	0	0
Trips and excursions	3	2	5	11	3	0	1	31	5	0	1	0	0	0	0
Maps and globes			45												

Analysis of Questionnaire II.—From replies to this questionnaire the total number of each audio-visual aid used in each of the twelve subject fields for all the schools of the county was obtained. This number, divided by the number of schools, gave the average county use for each aid.

7. See Appendix E for list of principals who returned Questionnaire II.



The information obtained from the responses received from each individual school was also tabulated and is shown in Tables III through XVII. To show the use made of visual aids in each school as compared with the aids recommended by the committee and with the average county use, Tables III through XVII also contain the recommendations of the committee and the average county use for each aid in each subject field. These comparisons will be presented in Chapter III.

### CHAPTER III

#### A COMPARISON OF THE AUDIO-VISUAL AIDS USED IN FIFTEEN GUILFORD COUNTY HIGH SCHOOLS WITH THEIR AVERAGE USE IN THE COUNTY AND WITH THE RECOMMENDATIONS OF THE COMMITTEE OF EXPERTS

The survey revealed that the number of audio-visual aids used in the different high schools in Guilford County varied widely. There was also a wide variation in the number of aids used in different subjects throughout the county. To show this variation tables were prepared which also show the number of aids that were used in each curriculum field in each of the high schools of the county during the school year 1946-1947; and in addition these tables show a comparison of the number of aids used in each school with the average use in the county as a whole and with the recommendations of the committee of experts.

Table II shows the average number of audio-visual aids used in each of the various subjects taught in the Guilford County High Schools during 1946-1947. To eliminate fractions in the tables, the nearest whole numbers were used.

The comparison of audio-visual aids by subjects used in the Guilford County High Schools are shown in Tables III through XVII. For comparison these tables also give the county averages as shown in Table II, and the recommendations of the committee of experts as shown in Table I, for each aid as used in the various curriculum fields.

#### Alamance High School

Table III shows the audio-visual aids used by the Alamance High School during 1946-1947.

An examination of this table shows that one motion picture film

TABLE III

A COMPARISON OF THE NUMBER OF AUDIO-VISUAL AIDS RECOMMENDED FOR USE IN TWELVE CURRICULUM FIELDS BY A COMMITTEE OF EXPERTS, WITH THEIR AVERAGE USE IN GUILFORD COUNTY HIGH SCHOOLS AND WITH THEIR USE IN ALAMANCE HIGH SCHOOL

Audio- Visual Aid	Number of aids		Curriculum field														
	Recommended by committee	Average use in county Use in this school	English	Mathematics	History	Sciences	Physical Education	Language	Foreign	Music	Art	Agriculture	Economics	Home Shop	Vocational Business	General	Salesmanship
Silent and sound films	Committee		20	7	14	30	19	7	9	15	18	7	14	7			
	County		6	1	11	15	6	0	2	20	9	2	1	0			
	School		0	0	1	0	0	0	0	20	0	x	x	x			
Film strips	Committee		21	12	17	33	20	9	14	18	27	5	20	7			
	County		6	1	6	8	4	0	1	17	2	0	0	0			
	School		0	0	0	0	0	0	0	50	0	x	x	x			
Glass slides	Committee		10	6	9	61	18	1	37	41	63	50	37	50			
	County		2	0	3	18	1	0	0	31	1	0	0	0			
	School		0	0	0	0	0	0	0	0	0	x	x	x			
Phono- graph records	Committee		36	1	10	3	18	14	112	0	2	0	26	2			
	County		6	0	1	0	6	1	8	0	0	0	1	0			
	School		10	0	0	0	20	0	0	0	0	x	x	x			
Models	Committee		1	13	2	14	33	0	1	4	5	6	1	0			
	County		0	1	1	6	0	0	9	4	1	0	0	0			
	School		0	10	0	0	0	0	50	10	20	x	x	x			
Charts	Committee		6	38	27	57	52	2	10	50	22	37	14	5			
	County		7	4	18	23	11	6	9	34	18	0	3	0			
	School		50	20	30	30	25	75	50	75	75	x	x	x			
Flat pictures	Committee		122	23	65	148	82	22	70	37	170	25	21	5			
	County		26	3	21	26	14	12	18	53	79	0	14	25			
	School		100	0	75	150	50	100	100	200	200	x	x	x			
Trips and ex- cursions	Committee		5	4	7	14	7	1	6	17	17	1	4	1			
	County		3	2	5	11	3	0	1	31	5	0	1	0			
	School		0	0	3	6	8	0	2	10	0	x	x	x			
Maps and globes	Committee					40											
	County					45											
	School					29											

X indicates that this subject is not taught in this high school. was shown for history, with a county average of eleven compared with the committee's recommendation of fourteen. Twenty motion picture films were used in agriculture, a number equal to the county average of twenty and above the committee's recommendation of fifteen.

As shown in Table III, no film strips were used in this school except in agriculture, where fifty were used in contrast to eighteen as recommended by the committee, and an average of seventeen used in the county. No glass slides were used in any subjects. Ten phonograph records were used in English, whereas thirty-six were recommended by the committee and an average of only six were used in the county. Twenty records were used in physical education, as compared with eighteen recommended by the committee and an average of six for the county.

Ten models were used in mathematics as compared with thirteen recommended by the committee and one, the average for the county as a whole. Fifty models were used in art; ten in agriculture; and twenty in home economics. The following charts were used: English, fifty; mathematics, twenty; history, thirty; science, thirty; physical education, twenty-five; foreign languages, seventy-five; art, fifty; agriculture, seventy-five; home economics, seventy-five. These numbers compare favorably with those suggested by the committee and are much greater than those for the county as a whole. A total of 975 flat pictures were used in all the subjects as compared with 790 recommended by the committee and 291, average county use.

Table III shows that three field trips were taken in history classes compared with seven recommended by the committee and five, the average in the county as a whole. Six trips were made in the sciences, compared with the committee's suggestion of fourteen and an average of eleven for the county. Two trips were made in art in comparison with an average of one in the county and a recommendation of six by the committee. In agriculture ten trips were made, compared with thirty-one made on an average throughout the county, and a recommended seventeen.

Table III shows that Alamance used a total of twenty-nine maps and

globes in history as compared with an average of forty-five in the county and forty recommended by the committee.

#### Allen Jay High School

Table IV shows the audio-visual aids used by the Allen Jay High School during 1946-1947.

Allen Jay High School used only eleven motion picture films in all the high school subjects. This number was greatly exceeded by both the county average of seventy-three and the committee's recommendation of 167. Thirty-one film strips were used in all subjects as compared with an average of forty-five for the county as a whole. Twenty-five of these, however, were used in the sciences, which is considerably above the average of eighty for the county. It is slightly below the number, thirty-three, recommended by the committee. As shown by the table, no glass slides were used and only two phonograph records were used in general business as compared with an average of one for the county as a whole, and with twenty-six recommended by the committee.

No models were used and only four charts were used in all of the subjects, two in history and two in science. No flat pictures were used in any of the high school subjects. Two trips were taken in history, compared with the county average of five and the committee's recommendation of seven. Three field trips were taken in science, compared with eleven, the average in the county, and fourteen recommended by the committee. In home economics, two trips compared unfavorably with five for the county and seventeen recommended by the committee. Two trips taken by general business classes compared favorably with an average of one for the county, but unfavorably with the four recommended by the committee.

TABLE IV

A COMPARISON OF THE NUMBER OF AUDIO-VISUAL AIDS RECOMMENDED FOR USE IN TWELVE CURRICULUM FIELDS BY A COMMITTEE OF EXPERTS, WITH THEIR AVERAGE USE IN GUILFORD COUNTY HIGH SCHOOLS AND WITH THEIR USE IN ALLEN JAY HIGH SCHOOL

Audio- Visual Aid	Number of aids Recommended by committee Average use in county Use in this school	Curriculum field												
		English	Mathematics	History	Sciences	Physical Education	Foreign Language	Music	Art	Agriculture	Home Economics	Shop	Vocational Business	General
Silent and sound films	Committee	20	7	14	30	19	7	9	15	18	7	14	7	
	County	6	1	11	15	6	0	2	20	9	2	1	0	
	School	5	0	0	4	0	0	x	0	0	0	1	1	
Film strips	Committee	21	12	17	33	20	9	14	18	27	5	20	7	
	County	6	1	6	8	4	0	1	17	2	0	0	0	
	School	4	0	0	25	2	0	x	0	0	0	0	0	
Glass slides	Committee	10	6	9	61	18	1	37	41	63	50	37	50	
	County	2	0	3	18	1	0	0	31	1	0	0	0	
	School	0	0	0	0	0	0	x	0	0	0	0	0	
Phono- graph records	Committee	36	1	10	3	18	14	11	2	0	2	0	26	2
	County	6	0	1	0	6	1	8	0	0	0	0	1	0
	School	0	0	0	0	0	0	x	0	0	0	0	2	0
Models	Committee	1	13	2	14	33	0	1	4	5	6	1	0	
	County	0	1	1	6	0	0	9	4	1	0	0	0	
	School	0	0	0	0	0	0	x	0	0	0	0	0	
Charts	Committee	6	38	27	57	52	2	10	50	22	37	14	5	
	County	7	4	18	23	11	6	9	34	18	0	3	0	
	School	0	0	2	2	0	0	x	0	0	0	0	0	
Flat pictures	Committee	122	23	65	148	82	22	70	37	170	25	21	5	
	County	26	3	21	26	14	12	18	53	79	0	14	25	
	School	0	0	0	0	0	0	x	0	0	0	0	0	
Trips and ex- cursions	Committee	5	4	7	14	7	1	6	17	17	1	4	1	
	County	3	2	5	11	3	0	1	31	5	0	1	0	
	School	0	0	2	3	0	0	x	0	2	0	2	0	
Maps and globes	Committee				40									
	County				45									
	School				30									

X indicates that this subject is not taught in this high school

Allen Jay High School used a total of thirty maps and globes in history, as compared with an average of forty-five for the county, and forty recommended by the committee.

Bessemer High School

The audio-visual aids used in the Bessemer High School for the school year 1946-1947 are shown in Table V.

TABLE V

A COMPARISON OF THE NUMBER OF AUDIO-VISUAL AIDS RECOMMENDED FOR USE IN TWELVE CURRICULUM FIELDS BY A COMMITTEE OF EXPERTS, WITH THEIR AVERAGE USE IN GUILFORD COUNTY HIGH SCHOOLS AND WITH THEIR USE IN BESSEMER HIGH SCHOOL

Audio- Visual Aid	Number of aids Recommended by committee Average use in county Use in this school	Curriculum field											
		English	Mathematics	History	Sciences	Physical Education	Language Foreign	Music	Art	Agriculture	Economics	Home Shop	Vocational Business
Silent and sound films	Committee	20	7	14	30	19	7	9	15	18	7	14	7
	County	6	1	11	15	6	0	2	20	9	2	1	0
	School	5	0	4	10	2	0	0	x	3	x	0	0
Film strips	Committee	21	12	17	33	20	9	14	18	27	5	20	7
	County	6	1	6	8	4	0	1	17	2	0	0	0
	School	0	0	0	0	0	0	0	x	0	x	0	0
Glass slides	Committee	10	6	9	61	18	1	37	41	63	50	37	50
	County	2	0	3	18	1	0	0	31	1	0	0	0
	School	0	0	0	0	0	0	0	x	0	x	0	0
Phono- graph records	Committee	36	1	10	3	18	14	112	0	2	0	26	2
	County	6	0	1	0	6	1	8	0	0	0	1	0
	School	0	0	0	0	0	0	0	x	0	x	0	0
Models	Committee	1	13	2	14	33	0	1	4	5	6	1	0
	County	0	1	1	6	0	0	9	4	1	0	0	0
	School	0	0	0	0	0	0	0	x	0	x	0	0
Charts	Committee	6	38	27	57	52	2	10	50	22	37	14	5
	County	7	4	18	23	11	6	9	34	18	0	3	0
	School	0	0	36	50	3	0	2	x	2	x	0	0
Flat pictures	Committee	122	23	65	148	82	22	70	37	170	25	21	5
	County	26	3	21	26	14	12	18	53	79	0	14	25
	School	0	0	0	0	0	0	0	0	0	x	0	0
Trips and ex- cursions	Committee	5	4	7	14	7	1	6	17	17	1	4	1
	County	3	2	5	11	3	0	1	31	5	0	1	0
	School	0	0	2	5	0	0	0	x	0	x	0	0
Maps and globes	Committee				40								
	County				45								
	School				29								

X indicates that this subject is not taught in this high school.

Only twenty-four motion picture films were used in all subjects, ten of which were shown in the fields of science. The county average of films for all subjects was seventy-three. No glass slides, phonograph records or models were used in any subject in this school during 1946-1947. Thirty-six charts were used in history. This was twice the average of eighteen used in the county and more than the number, twenty-seven, recommended by the committee. Fifty charts were used in science as compared with twenty-three, the average for the county, and fifty-seven recommended by the committee. No flat pictures were used according to the report. Two trips were taken in history and five were taken in science.

This school used twenty-nine maps and globes in history; the average for the county was forty-five.

#### Colfax High School

Table VI shows the status of the use of audio-visual aids in the Colfax High School.

Colfax used four motion picture films in English, as compared with an average of six in the county and twenty recommended for use by the committee. In the field of history, the average for the county was eleven; Colfax used ten and the committee suggested fourteen as the correct number to show in this field. Nine motion picture films were used in science, and four were used in physical education. These numbers are slightly under the average for the county and considerably under the number recommended by the committee. Two films were used in home economics.

No film strips, glass slides, phonograph records, models or flat pictures were used as aids to instruction in this school. However, two charts



were used in history, four in science, and four in home economics.

TABLE VI

A COMPARISON OF THE NUMBER OF AUDIO-VISUAL AIDS RECOMMENDED FOR USE IN TWELVE CURRICULUM FIELDS BY A COMMITTEE OF EXPERTS, WITH THEIR AVERAGE USE IN GUILFORD COUNTY HIGH SCHOOLS AND WITH THEIR USE IN COLFAX HIGH SCHOOL

Audio- Visual Aid	Number of aids Recommended by committee Average use in county Use in this school	Curriculum field														
		English	Mathematics	History	Sciences	Physical Education	Language	Foreign	Music	Art	Agriculture	Economics	Home Shop	Vocational Business	General	Salesmanship
Silent and sound films	Committee	20	7	14	30	19	7	9	15	18	7	14	7			
	County	6	1	11	15	6	0	2	20	9	2	1	0			
	School	4	0	10	9	4	0	x	x	2	x	x	x			
Film strips	Committee	21	12	17	33	20	9	14	18	27	5	20	7			
	County	6	1	6	8	4	0	1	17	2	0	0	0			
	School	0	0	0	0	0	0	x	x	0	x	x	x			
Glass slides	Committee	10	6	9	61	18	1	37	41	63	50	37	50			
	County	2	0	3	18	1	0	0	31	1	0	0	0			
	School	0	0	0	0	0	0	x	x	0	x	x	x			
Phono- graph records	Committee	36	1	10	3	18	14	112	0	2	0	26	2			
	County	6	0	1	0	6	1	8	0	0	0	1	0			
	School	0	0	0	0	0	0	x	x	0	x	x	x			
Models	Committee	1	13	2	14	33	0	1	4	5	6	1	0			
	County	0	1	1	6	0	0	9	4	1	0	0	0			
	School	0	0	0	0	0	0	x	x	0	x	x	x			
Charts	Committee	6	38	27	57	52	2	10	50	22	37	14	5			
	County	7	4	18	23	11	6	9	34	18	0	3	0			
	School	0	0	2	4	0	0	x	x	4	x	x	x			
Flat pictures	Committee	122	23	65	148	82	22	70	37	170	25	21	5			
	County	26	3	21	26	14	12	18	53	79	0	14	25			
	School	0	0	2	4	0	0	x	x	0	x	x	x			
Trips and ex- cursions	Committee	5	4	7	14	7	1	6	17	17	1	4	1			
	County	3	2	5	11	3	0	1	31	5	0	1	0			
	School	2	0	4	6	0	0	x	x	2	x	x	x			
Maps and globes	Committee				40											
	County				45											
	School				37											

X indicates that this subject is not taught in this high school.

The following field trips and excursions were made: English, two; history, four; science, six; and home economics, two. All these are

slightly below the average for the county as a whole and considerably below the number suggested by the committee.

Colfax used thirty-seven maps and globes which is only three less than the number suggested by the committee. However this is eight less than the average for the county as a whole.

#### Gibsonville High School

The survey revealed Gibsonville High School used more audio-visual aids than any other school previously mentioned. Table VIII shows the aids used in this school.

In every subject except home economics, English, general business, and science, more motion picture films were used than were used in the average school in the county. In English, six films were shown, a number equal to the county average. Eight films were used in mathematics in contrast to an average of one for the county, and seven recommended by the committee. Sixteen films were used in history, which again exceeds the committee's recommendation of fourteen and the county's average of eleven. Seven films were used in vocational shop, the number recommended by the committee. This greatly exceeds the county average of two.

It is interesting to note that Gibsonville used a total of fifty-seven film strips in six subjects, a number which is more than the average of forty-five for the county. Only in science was the use of film strips less than the county average, it being seven instead of the eight strips.

Science is the only subject in which glass slides were used. Fifty were shown as compared with sixty-one recommended by the committee, and eighteen the average for the county.

Sixty-six phonograph records were used in seven subjects. Twenty-

eight, almost half, were used in art.

TABLE VII

A COMPARISON OF THE NUMBER OF AUDIO-VISUAL AIDS RECOMMENDED FOR USE IN TWELVE CURRICULUM FIELDS BY A COMMITTEE OF EXPERTS, WITH THEIR AVERAGE USE IN GUILFORD COUNTY HIGH SCHOOLS AND WITH THEIR USE IN GIBSONVILLE HIGH SCHOOL

Audio- Visual Aid	Number of aids		Curriculum field																	
	Recommended by committee	Average use in county	English	Mathematics	History	Sciences	Education	Physical	Language	Foreign	Music	Art	Agriculture	Economics	Home	Shop	Vocational	Business	General	Salesmanship
Silent and sound films	Committee		20	7	14	30	19	7	9	15	18	7	14	7						
	County		6	1	11	15	6	0	2	20	9	2	1	0						
	School		6	8	16	12	11	0	5	x	8	7	0	x						
Film strips	Committee		21	12	17	33	20	9	14	18	27	5	20	7						
	County		6	1	6	8	4	0	1	17	2	0	0	0						
	School		20	6	8	7	12	0	4	x	0	0	0	x						
Glass slides	Committee		10	6	9	61	18	1	37	41	63	50	37	50						
	County		2	0	3	18	1	0	0	31	1	0	0	0						
	School		0	0	0	50	0	0	0	x	0	0	0	x						
Phono- graph records	Committee		36	1	10	3	18	14	112	0	2	0	26	2						
	County		6	0	1	0	6	1	8	0	0	0	1	0						
	School		12	4	6	2	12	0	28	0	28	0	0	x						
Models	Committee		1	13	2	14	33	0	1	4	5	6	1	0						
	County		0	1	1	6	0	0	9	4	1	0	0	0						
	School		2	2	3	4	1	0	3	x	2	0	0	x						
Charts	Committee		6	38	27	57	52	2	10	50	22	37	14	5						
	County		7	4	18	23	11	6	9	34	18	0	3	0						
	School		4	10	11	4	8	0	0	x	12	0	0	x						
Flat pictures	Committee		122	23	65	148	82	22	70	37	170	25	21	5						
	County		26	3	21	26	14	12	18	53	79	0	14	25						
	School		16	8	12	12	10	2	12	x	12	0	0	x						
Trips and ex- cursions	Committee		5	4	7	14	7	1	6	17	17	1	4	1						
	County		3	2	5	11	3	0	1	31	5	0	1	0						
	School		10	10	12	24	4	3	4	x	2	6	0	x						
Maps and globes	Committee					40														
	County					45														
	School					81														

X indicates that this subject is not taught in this high school.

The table shows that seventeen models were used in all subjects by the Gibsonville High School. This is five below the county average of

twenty-two. Four models, the largest number used in one subject, were used in science, in which field the county average was six, and the number recommended, fourteen. In mathematics, the use of ten charts showed an increase of six over the county average. However, in history, only eleven charts, seven less than the eighteen average, were in use. In home economics, the twelve charts used compared unfavorably with eighteen, the average for the whole county. A total of eighty-four flat pictures for all subjects was below the county average of 291.

Trips and excursions were taken by every department except general business. A total of seventy-five trips compares favorably with a county average of sixty-two, but is eight less than the number, eighty-four, suggested by the committee. The largest number, twenty-four, was taken by the science department. History classes had the privilege of twelve trips as compared with five, the average for the county, and seven suggested by the committee. Ten trips were listed for English and ten for mathematics.

Gibsonville High School used a total of eighty-one maps and globes. This number is almost twice the county average of forty-five, and slightly over twice the number, forty, recommended by the committee.

#### Guilford High School

The use of audio-visual aids in the Guilford High School is shown in Table VIII. A total of ninety-two sound and silent films were shown during the year. This compares favorably with a county average of seventy-three. The largest number of films, thirty, was used in agriculture. The average for the county in this subject was twenty and the committee recommended fifteen. Twenty films were used in science classes, which was five above the county average, but ten below the committee's recommendation.

TABLE VIII

A COMPARISON OF THE NUMBER OF AUDIO-VISUAL AIDS RECOMMENDED FOR USE IN TWELVE CURRICULUM FIELDS BY A COMMITTEE OF EXPERTS, WITH THEIR AVERAGE USE IN GUILFORD COUNTY HIGH SCHOOLS AND WITH THEIR USE IN GUILFORD HIGH SCHOOL

Audio- Visual Aid	Number of aids		Curriculum field																	
	Recommended by committee	Average use in county Use in this school	English	Mathematics	History	Sciences	Education	Physical	Language	Foreign	Music	Art	Agriculture	Economics	Home	Shop	Vocational	Business	General	Salesmanship
Silent and sound films	Committee		20	7	14	30	19	7	9	15	18	7	14	7						
	County		6	1	11	15	6	0	2	20	9	2	1	0						
	School		6	0	12	20	8	0	0	30	16	x	0	x						
Film strips	Committee		21	12	17	33	20	9	14	18	27	5	20	7						
	County		6	1	6	8	4	0	1	17	2	0	0	0						
	School		6	2	6	8	5	0	0	20	4	x	0	x						
Glass slides	Committee		10	6	9	61	18	1	37	41	63	50	37	50						
	County		2	0	3	18	1	0	0	31	1	0	0	0						
	School		0	0	0	20	0	0	0	20	0	x	0	x						
Phono- graph records	Committee		36	1	10	3	18	14	112	0	2	0	26	2						
	County		6	0	1	0	6	1	8	0	0	0	1	0						
	School		14	0	0	0	6	0	0	0	0	x	0	x						
Models	Committee		1	13	2	14	33	0	1	4	5	6	1	0						
	County		0	1	1	6	0	0	9	4	1	0	0	0						
	School		0	0	0	12	0	0	0	6	0	x	0	x						
Charts	Committee		6	38	27	57	52	2	10	50	22	37	14	5						
	County		7	4	18	23	11	6	9	34	18	0	3	0						
	School		4	0	6	25	20	0	0	25	5	x	0	x						
Flat pictures	Committee		122	23	65	148	82	22	70	37	170	25	21	5						
	County		26	3	21	26	14	12	18	53	79	0	14	25						
	School		15	0	6	20	16	0	0	10	10	x	0	x						
Trips and ex- cursions	Committee		5	4	7	14	7	1	6	17	17	1	4	1						
	County		3	2	5	11	3	0	1	31	5	0	1	0						
	School		2	2	4	15	6	0	0	30	2	x	0	x						
Maps and globes	Committee					40														
	County					45														
	School					37														

X indicates that this subject is not taught in this high school.

Film strips numbering fifty-one were used in every field of study except art, foreign languages, and general business. The county average for the use of film strips as shown was forty-five. More film strips, a

total of twenty, were used in agriculture than in any other subject. The committee recommended eighteen, and the county average was seventeen.

Twenty glass slides were used in science classes. This number is slightly above the county average of eighteen, but is much below the committee's recommendation of sixty-one. Twenty glass slides were used in agriculture.

In this school visual aids were used more consistently in agriculture than in any other subject. The only aids not used in agriculture were phonograph records. Twenty-five charts, six models, and ten flat pictures were used, and thirty field trips and excursions were taken by classes in agriculture.

Guilford High School used thirty-seven maps and globes in history. This number is eight less than the county average and three less than the number recommended by the committee.

#### Jamestown High School

Jamestown High School's audio-visual aid program is shown in Table IX. According to this table, the school used fifty-six sound and silent films in all subjects. The greatest number was used in the field of science with a total of twelve. Ten were shown in history and ten were shown in home economics. That two films were shown in connection with foreign languages is an interesting fact revealed by the study.

Fifteen film strips were shown in connection with the teaching of English; twelve were shown in history, and twelve in science. Forty-eight slides were used in teaching science, and twelve in teaching physical education.

Twelve charts were used in English as compared with a county

TABLE IX

A COMPARISON OF THE NUMBER OF AUDIO-VISUAL AIDS RECOMMENDED FOR USE IN TWELVE CURRICULUM FIELDS BY A COMMITTEE OF EXPERTS, WITH THEIR AVERAGE USE IN GUILFORD COUNTY HIGH SCHOOLS AND WITH THEIR USE IN JAMESTOWN HIGH SCHOOL

Audio- Visual Aid	Number of aids Recommended by committee Average use in county Use in this school	Curriculum field													
		English	Mathematics	History	Sciences	Physical Education	Language	Foreign	Music	Art	Agriculture	Economics	Home Shop	Vocational Business	General
Silent and sound films	Committee	20	7	14	30	19	7	9	15	18	7	14	7		
	County	6	1	11	15	6	0	2	20	9	2	1	0		
	School	8	4	10	12	6	2	x	x	10	x	4	x		
Film strips	Committee	21	12	17	33	20	9	14	18	27	5	20	7		
	County	6	1	6	8	4	0	1	17	2	0	0	0		
	School	15	2	12	12	10	0	x	x	4	x	1	x		
Glass slides	Committee	10	6	9	61	18	1	37	41	63	50	37	50		
	County	2	0	3	18	1	0	0	31	1	0	0	0		
	School	0	0	0	48	12	0	x	x	0	x	0	x		
Phono- graph records	Committee	36	1	10	3	18	14	112	0	2	0	26	2		
	County	6	0	1	0	6	1	8	0	0	0	1	0		
	School	20	0	2	0	12	6	x	x	0	x	0	x		
Models	Committee	1	13	2	14	33	0	1	4	5	6	1	0		
	County	0	1	1	6	0	0	9	4	1	0	0	0		
	School	2	0	12	6	2	0	x	x	0	x	0	x		
Charts	Committee	6	38	27	57	52	2	10	50	22	37	14	5		
	County	7	4	18	23	11	6	9	34	18	0	3	0		
	School	12	12	50	36	24	10	x	x	18	x	10	x		
Flat pictures	Committee	122	23	65	148	82	22	70	37	170	25	21	5		
	County	26	3	21	26	14	12	18	53	79	0	14	25		
	School	20	10	16	12	12	10	x	x	0	x	3	x		
Trips and ex- cursions	Committee	5	4	7	14	7	1	6	17	17	1	4	1		
	County	3	2	5	11	3	0	1	31	5	0	1	0		
	School	8	12	12	12	4	0	x	x	1	x	6	x		
Maps and globes	Committee				40										
	County				45										
	School				44										

X indicates that this subject is not taught in this high school.

average of seven and a committee recommendation of six. Fifty charts were used in history. The county average was eighteen and the committee recommended twenty-seven. The Jamestown High School used a total of 162

charts, which greatly exceeds the 133 average for the county.

Flat pictures were used in every subject except in home economics. A total of eighty-three pictures were used in all subjects.

Eight trips or excursions were taken in connection with English classes. The average for the county was only three, and the committee recommended only five. Twelve trips were taken in mathematics, as compared with an average for the county of two, and the committee's recommendation of four. Twelve trips were taken in science, twelve in history, and four in physical education.

Jamestown used forty-four maps and globes, a number which compares favorably with the county average and with the number recommended by the committee.

#### McLeansville High School

McLeansville High School's audio-visual aid program is shown in Table X. According to this table fifty-seven sound and silent films were shown in all subjects during the year 1946-1947. This is sixteen less than the average for the county, and is many less than the number, 167, suggested by the committee. The greatest number of films, twenty, was used in the department of agriculture.

Sixty-three film strips were used at McLeansville in all subjects. This number is above the county average of forty-five. The greatest number, twenty, was used in science. Ten were used in history and ten in physical education.

Glass slides were used only in science where twenty-five were used during the year. This number is seven above the county average of eighteen. Fifteen phonograph records used in English compared favorably with a county average of six.



TABLE X

A COMPARISON OF THE NUMBER OF AUDIO-VISUAL AIDS RECOMMENDED FOR USE IN TWELVE CURRICULUM FIELDS BY A COMMITTEE OF EXPERTS, WITH THEIR AVERAGE USE IN GUILFORD COUNTY HIGH SCHOOLS AND WITH THEIR USE IN McLEANSVILLE HIGH SCHOOL

Audio- Visual Aid	Number of aids		Curriculum field															
	Recommended by committee	Average use in county	English	Mathematics	History	Sciences	Physical Education	Language	Foreign	Music	Art	Agriculture	Economics	Home Shop	Vocational	Business	General	Salesmanship
Silent and sound films	Committee		20	7	14	30	19	7	9	15	18	7	14	7				
	County		6	1	11	15	6	0	2	20	9	2	1	0				
	School		6	0	4	12	10	0	x	20	5	x	x	x				
Film strips	Committee		21	12	17	33	20	9	14	18	27	5	20	7				
	County		6	1	6	8	4	0	1	17	2	0	0	0				
	School		5	0	10	20	10	0	x	12	6	x	x	x				
Glass slides	Committee		10	6	9	61	18	1	37	41	63	50	37	50				
	County		2	0	3	18	1	0	0	31	1	0	0	0				
	School		0	0	0	25	0	0	x	0	0	x	x	x				
Phono- graph records	Committee		36	1	10	3	18	14	112	0	2	0	26	2				
	County		6	0	1	0	6	1	8	0	0	0	1	0				
	School		15	0	0	0	0	0	x	0	0	x	x	x				
Models	Committee		1	13	2	14	33	0	1	4	5	6	1	0				
	County		0	1	1	6	0	0	9	4	1	0	0	0				
	School		0	0	0	16	0	0	x	6	0	x	x	x				
Charts	Committee		6	38	27	57	52	2	10	50	22	37	14	5				
	County		7	4	18	23	11	6	9	34	18	0	3	0				
	School		8	0	12	20	6	0	x	25	4	x	x	x				
Flat pictures	Committee		122	23	65	148	82	22	70	37	170	25	21	5				
	County		26	3	21	26	14	12	18	53	79	0	14	25				
	School		20	0	40	50	10	0	x	20	10	x	x	x				
Trips and ex- cursions	Committee		5	4	7	14	7	1	6	17	17	1	4	1				
	County		3	2	5	11	3	0	1	31	5	0	1	0				
	School		0	0	4	12	0	0	x	20	15	x	x	x				
Maps and globes	Committee				40													
	County				45													
	School				32													

X indicates that this subject is not taught in this high school.

Sixteen models were a part of the science program; this number is above the average of six for the county and fourteen recommended by the committee. Six models in agriculture compared favorably with an average

of four for the county and four recommended by the committee.

Twenty-five charts were used in agriculture, twenty in science, and twelve in history. Seventy-five charts in all subjects gave aid to the teaching program.

Only 150 flat pictures were used in all subjects, which is considerably under the county average of 291. The largest number of pictures, fifty, was used in science. Forty were used in history.

During the year, fifty-one field trips and excursions were made. Twenty of these were made by the department of agriculture. This number is below the county average of thirty-one and above the committee's commendation of seventeen.

McLeansville had thirty-two maps and globes which is less than the committee's recommendation of forty, and the county average of forty-five.

#### Monticello High School

Table XI represents the audio-visual aids used in the Monticello High School.

The largest number, twenty-two, motion picture films, was used in the field of science. Twenty were used in history and twelve in English. Sixty-three films were used in all subjects during the year. This number is ten below the county average of seventy-three.

Thirty-seven film strips were used in all subjects, with seventeen of these being used in the field of science. Forty-two glass slides were also used in the field of science, twenty in history, and twenty-five in English. This is one of the few schools using glass slides as an aid in the teaching of English.

Fifteen charts were used in history which compares favorably with

with eighteen the average for the county. Three charts were used in the study of science.

TABLE XI

A COMPARISON OF THE NUMBER OF AUDIO-VISUAL AIDS RECOMMENDED FOR USE IN TWELVE CURRICULUM FIELDS BY A COMMITTEE OF EXPERTS, WITH THEIR AVERAGE USE IN GUILFORD COUNTY HIGH SCHOOLS AND WITH THEIR USE IN MONTICELLO HIGH SCHOOL

Audio- Visual Aid	Number of aids Recommended by committee Average use in county Use in this school	Curriculum field															
		English	Mathematics	History	Sciences	Education	Physical	Language	Foreign	Music	Art	Agriculture	Economics	Home Shop	Vocational	Business	General
Silent and sound films	Committee	20	7	14	30	19	7	9	15	18	7	14	7				
	County	6	1	11	15	6	0	2	20	9	2	1	0				
	School	12	4	20	22	x	2	x	x	3	x	x	x				
Film strips	Committee	21	12	17	33	20	9	14	18	27	5	20	7				
	County	6	1	6	8	4	0	1	17	2	0	0	0				
	School	4	1	15	17	x	0	x	x	0	x	x	x				
Glass slides	Committee	10	6	9	61	18	1	37	41	63	50	37	50				
	County	2	0	3	18	1	0	0	31	1	0	0	0				
	School	25	2	20	42	x	0	x	x	0	x	x	x				
Phono- graph records	Committee	36	1	10	3	18	14	112	0	2	0	26	2				
	County	6	0	1	0	6	1	8	0	0	0	1	0				
	School	0	0	0	0	x	0	x	x	0	x	x	x				
Models	Committee	1	13	2	14	33	0	1	4	5	6	1	0				
	County	0	1	1	6	0	0	9	4	1	0	0	0				
	School	0	0	0	0	x	0	x	x	0	x	x	x				
Charts	Committee	6	38	27	57	52	2	10	50	22	37	14	5				
	County	7	4	18	23	11	6	9	34	18	0	3	0				
	School	0	0	15	3	x	0	x	x	0	x	x	x				
Flat pictures	Committee	122	23	65	148	82	22	70	37	170	25	21	5				
	County	26	3	21	26	14	12	18	53	79	0	14	25				
	School	20	0	25	30	x	0	x	x	0	x	x	x				
Trips and ex- cursions	Committee	5	4	7	14	7	1	6	17	17	1	4	1				
	County	3	2	5	11	3	0	1	31	5	0	1	0				
	School	1	4	5	12	x	0	x	x	3	x	x	x				
Maps and globes	Committee				40												
	County				45												
	School				46												

X indicates that this subject is not taught in this high school.

Seventy-five flat pictures were used in all subjects with the largest number, thirty, being used in the teaching of science.

Twenty-five field trips and excursions were taken by the classes in this school. Of this number almost half, twelve, were taken in science. This number is one above the county average of eleven and two below the committee's recommendation of fourteen. Five trips were taken in history and four in mathematics.

Monticello used forty-six maps and globes, which was one above the average for the county.

#### Nathanael Greene High School

Nathanael Greene High School's audio-visual aid program is shown in Table XII.

During the year, 132 motion picture films were shown in this school. This number is much above the average for the county. As shown in the table, agriculture again leads with a use of the largest number of films, forty; science follows closely with thirty-six. Both of these are well above the county average and above the number recommended by the committee. Twenty-five films were used in home economics as compared with nine, the average for the county and eighteen, the number recommended by the committee.

Film strips were used in six separate fields of study, with agriculture again using the greatest number, which was fifteen. Ten film strips were used in English.

Forty glass slides were used in teaching science, and twenty-five in teaching agriculture. Thirty-six charts were used in science and thirty in physical education. Thirty flat pictures were used in all subjects, with ten being used in English, fifteen in physical education, and five in agriculture.

TABLE XII

A COMPARISON OF THE NUMBER OF AUDIO-VISUAL AIDS RECOMMENDED FOR USE IN TWELVE CURRICULUM FIELDS BY A COMMITTEE OF EXPERTS, WITH THEIR AVERAGE USE IN GUILFORD COUNTY HIGH SCHOOLS AND WITH THEIR USE IN NATHANAEL GREENE HIGH SCHOOL

Audio- Visual Aid	Number of aids Recommended by committee Average use in county Use in this school	Curriculum field															
		English	Mathematics	History	Sciences	Education	Physical	Language	Foreign	Music	Art	Agriculture	Economics	Home Shop	Vocational	Business	General
Silent and sound films	Committee	20	7	14	30	19	7	9	15	18	7	14	7				
	County	6	1	11	15	6	0	2	20	9	2	1	0				
	School	5	0	16	36	10	0	x	40	25	x	x	x				
Film strips	Committee	21	12	17	33	20	9	14	18	27	5	20	7				
	County	6	1	6	8	4	0	1	17	2	0	0	0				
	School	10	0	5	8	4	0	x	15	5	x	x	x				
Glass slides	Committee	10	6	9	61	18	1	37	41	63	50	37	50				
	County	2	0	3	18	1	0	0	31	1	0	0	0				
	School	0	0	0	40	0	0	x	25	0	x	x	x				
Phono- graph records	Committee	36	1	10	3	18	14	112	0	2	0	26	2				
	County	6	0	1	0	6	1	8	0	0	0	1	0				
	School	0	0	0	0	0	0	x	0	0	x	x	x				
Models	Committee	1	13	2	14	33	0	1	4	5	6	1	0				
	County	0	1	1	6	0	0	9	4	1	0	0	0				
	School	0	0	0	0	0	0	x	0	0	x	x	x				
Charts	Committee	6	38	27	57	52	2	10	50	22	37	14	5				
	County	7	4	18	23	11	6	9	34	18	0	3	0				
	School	0	0	0	36	30	0	x	5	0	x	x	x				
Flat pictures	Committee	122	23	65	148	82	22	70	37	170	25	21	5				
	County	26	3	21	26	14	12	18	53	79	0	14	25				
	School	10	0	0	0	15	0	x	5	0	x	x	x				
Trips and ex- cursions	Committee	5	4	7	14	7	1	6	17	17	1	4	1				
	County	3	2	5	11	3	0	1	31	5	0	1	0				
	School	0	4	0	25	0	0	x	50	0	x	x	x				
Maps and globes	Committee				40												
	County				45												
	School				50												

X indicates that this subject is not taught in this high school.

Four trips were made in mathematics, which is the number recommended by the committee and two above the county average. Twenty-five trips were taken in science. This is more than twice the county average of eleven and

is much above the number, fourteen, recommended by the committee. Fifty trips were taken as a part of the work in agriculture which is above the county average of thirty-one.

This school used a total of fifty maps and globes in history, which is five above the county average of forty-five, and ten above the minimum recommended by the committee of experts.

#### Pleasant Garden High School

The Pleasant Garden High School's audio-visual aid program is shown in Table XIII.

Fifteen silent and sound films were used in history, a number above the county average of eleven and the committee's recommendation of fourteen. Twenty films were shown in science, which is five above the county average, but ten less than the number recommended by the committee. Eighteen films were used in agriculture, three more than were recommended by the committee but two less than the average for the county. Ten films, one more than the county average of nine, were used in home economics.

Forty-three film strips were used in all subjects which is two below the average for the county. Of this number fifteen were shown in agriculture.

In the field of English six records were used. This is the average for the county, but is far short of the number, thirty-six, recommended by the committee. Ten models were utilized in science, which is four above the county average, but four less than the number recommended by the committee.

One hundred seventy charts were used in all subjects. The county average for all subjects was 133 charts. Twenty-five flat pictures were used in English as compared with a county average of twenty-six.

TABLE XIII

A COMPARISON OF THE NUMBER OF AUDIO-VISUAL AIDS RECOMMENDED FOR USE IN TWELVE CURRICULUM FIELDS BY A COMMITTEE OF EXPERTS, WITH THEIR AVERAGE USE IN GUILFORD COUNTY HIGH SCHOOLS AND WITH THEIR USE IN PLEASANT GARDEN HIGH SCHOOL

Audio- Visual Aid	Number of aids		Curriculum field													
	Recommended by committee Average use in county Use in this school		English	Mathematics	History	Sciences	Education	Physical Language	Foreign Music	Art	Agriculture	Economics	Home Shop	Vocational Business	General	Salesmanship
Silent and sound films	Committee		20	7	14	30	19	7	9	15	18	7	14	7		
	County		6	1	11	15	6	0	2	20	9	2	1	0		
	School		0	0	15	20	x	0	x	18	10	x	0	x		
Film strips	Committee		21	12	17	33	20	9	14	18	27	5	20	7		
	County		6	1	6	8	4	0	1	17	2	0	0	0		
	School		8	0	10	5	x	0	x	15	5	x	0	x		
Glass slides	Committee		10	6	9	61	18	1	37	41	63	50	37	50		
	County		2	0	3	18	1	0	0	31	1	0	0	0		
	School		0	0	0	0	x	0	x	0	0	x	0	x		
Phono- graph records	Committee		36	1	10	3	18	14	112	0	2	0	26	2		
	County		6	0	1	0	6	1	8	0	0	0	1	0		
	School		6	0	0	0	x	0	x	0	0	x	0	x		
Models	Committee		1	13	2	14	33	0	1	4	5	6	1	0		
	County		0	1	1	6	0	0	9	4	1	0	0	0		
	School		0	0	0	10	x	0	x	0	0	x	0	x		
Charts	Committee		6	38	27	57	52	2	10	50	22	37	14	5		
	County		7	4	18	23	11	6	9	34	18	0	3	0		
	School		20	18	25	20	x	0	x	25	50	x	12	x		
Flat pictures	Committee		122	23	65	148	82	22	70	37	170	25	21	5		
	County		26	3	21	26	14	12	18	53	79	0	14	25		
	School		25	0	30	20	x	25	x	15	25	x	20	x		
Trips and ex- cursions	Committee		5	4	7	14	7	1	6	17	17	1	4	1		
	County		3	2	5	11	3	0	1	31	5	0	1	0		
	School		0	5	8	20	x	0	x	12	15	x	0	x		
Maps and globes	Committee					40										
	County					45										
	School					98										

X indicates that this subject is not taught in this high school.

In mathematics, five field trips and excursions were made. The county average was two and the committee recommended four. In all subjects, sixty trips were made which is two below the county average of sixty-two.

Rankin High School

Table XIV gives the number of aids used in the Rankin High School.

TABLE XIV

A COMPARISON OF THE NUMBER OF AUDIO-VISUAL AIDS RECOMMENDED FOR USE IN TWELVE CURRICULUM FIELDS BY A COMMITTEE OF EXPERTS, WITH THEIR AVERAGE USE IN GUILFORD COUNTY HIGH SCHOOLS AND WITH THEIR USE IN RANKIN HIGH SCHOOL

Audio- Visual Aid	Number of aids Recommended by committee Average use in county Use in this school	Curriculum fields											
		English	Mathematics	History	Sciences	Physical Education	Foreign Language	Art Music	Agriculture	Economics	Home Shop	Vocational Business	General Salesmanship
Silent and sound films	Committee	20	7	14	30	19	7	9	15	18	7	14	7
	County	6	1	11	15	6	0	2	20	9	2	1	0
	School	10	2	40	40	6	0	3	x	30	0	5	5
Film strips	Committee	21	12	17	33	20	9	14	18	27	5	20	7
	County	6	1	6	8	4	0	1	17	2	0	0	0
	School	0	0	0	0	0	0	0	x	0	0	0	0
Glass slides	Committee	10	6	9	61	18	1	37	41	63	50	37	50
	County	2	0	3	18	1	0	0	31	1	0	0	0
	School	0	0	0	0	0	0	0	x	0	0	0	0
Phono- graph records	Committee	36	1	10	3	18	14	112	0	2	0	26	2
	County	6	0	1	0	6	1	8	0	0	0	1	0
	School	6	0	0	0	0	0	20	x	0	0	0	0
Models	Committee	1	13	2	14	33	0	1	4	5	6	1	0
	County	0	1	1	6	0	0	9	4	1	0	0	0
	School	0	0	0	25	0	0	0	x	0	0	0	0
Charts	Committee	6	38	27	57	52	2	10	50	22	37	14	5
	County	7	4	18	23	11	6	9	34	18	0	3	0
	School	0	0	40	36	12	0	0	x	0	0	1	0
Flat pictures	Committee	122	23	65	148	82	22	70	37	170	25	21	5
	County	26	3	21	26	14	12	18	53	79	0	14	25
	School	100	0	50	50	50	0	0	x	100	0	100	50
Trips and ex- cursions	Committee	5	4	7	14	7	1	6	17	17	1	4	1
	County	3	2	5	11	3	0	1	31	5	0	1	0
	School	10	0	20	10	4	0	6	x	10	0	0	12
Maps and globes	Committee				40								
	County				45								
	School				47								

X indicates that this subject is not taught in this high school.



Of interest is the large number of silent and sound films, forty, used both in history and in science. As shown in this study, this number for both subject fields is much above the county average and the committee's recommendation. Thirty films were also used in home economics. One hundred forty-one films were used in all subjects; this is the greatest number of films used by any high school in the county.

Six phonograph records were played in English, and twenty in art. Twenty-five models were shown in science.

Charts were displayed in four subjects; one in general business, forty in history, which exceeded the county average of eighteen by more than two to one, thirty-six in science, and twelve in physical education.

One hundred flat pictures were used in English which is only slightly less than the committee's recommendation of 122, and is much above the average for the county which was twenty-six.

Many field trips were taken by the students in the Rankin High School. Table XIV shows that a total of seventy-two trips were taken, the twenty taken in history exceeded the number taken in any other subject. However, ten were taken in each of the following: English, science and home economics, and twelve were taken in salesmanship. This school is the only one in the county teaching salesmanship, and it is significant that a large number of trips were taken in connection with this subject.

Rankin used forty-seven maps and globes which was two more than the average for the county.

#### Stokesdale High School

The Stokesdale High School's audio-visual aid program is shown in Table XV.

TABLE XV

A COMPARISON OF THE NUMBER OF AUDIO-VISUAL AIDS RECOMMENDED FOR USE IN TWELVE CURRICULUM FIELDS BY A COMMITTEE OF EXPERTS, WITH THEIR AVERAGE USE IN GUILFORD COUNTY HIGH SCHOOLS AND WITH THEIR USE IN STOKESDALE HIGH SCHOOL

Audio- Visual Aid	Number of aids		Curriculum field													
	Recommended by committee	Average use in county Use in this school	English	Mathematics	History	Sciences	Physical Education	Language	Foreign	Music	Art	Agriculture	Economics	Home Shop	Vocational Business	General
Silent and sound films	Committee		20	7	14	30	19	7	9	15	18	7	14	7		
	County		6	1	11	15	6	0	2	20	9	2	1	0		
	School		11	3	16	8	10	0	x	x	6	x	2	x		
Film strips	Committee		21	12	17	33	20	9	14	18	27	5	20	7		
	County		6	1	6	8	4	0	1	17	2	0	0	0		
	School		2	0	4	5	0	0	x	x	0	x	0	x		
Glass slides	Committee		10	6	9	61	18	1	37	41	63	50	37	50		
	County		2	0	3	18	1	0	0	31	1	0	0	0		
	School		0	0	0	0	0	0	x	x	0	x	0	x		
Phono- graph records	Committee		36	1	10	3	18	14	112	0	2	0	26	2		
	County		6	0	1	0	6	1	8	0	0	0	1	0		
	School		0	0	0	0	9	4	x	x	0	x	6	x		
Models	Committee		1	13	2	14	33	0	1	4	5	6	1	0		
	County		0	1	1	6	0	0	9	4	1	0	0	0		
	School		0	0	0	2	0	0	x	x	0	x	0	x		
Charts	Committee		6	38	27	57	52	2	10	50	22	37	14	5		
	County		7	4	18	23	11	6	9	34	18	0	3	0		
	School		0	0	3	30	0	0	x	x	17	x	4	x		
Flat pictures	Committee		122	23	65	148	82	22	70	37	170	25	21	5		
	County		26	3	21	26	14	12	18	53	79	0	14	25		
	School		7	0	5	30	6	0	x	x	26	x	2	x		
Trips and ex- cursions	Committee		5	4	7	14	7	1	6	17	17	1	4	1		
	County		3	2	5	11	3	0	1	31	5	0	1	0		
	School		3	2	2	4	7	0	x	x	5	x	2	x		
Maps and globes	Committee					40										
	County					45										
	School					29										

X indicates that this subject is not taught in this high school.

Motion picture films were used in every subject taught except foreign languages, with the largest number, sixteen, being used in the field of history. This is two above the committee's recommendation and five

above the average for the county. Eleven films were used in English which is almost twice the county average of six. Ten films were used in physical education.

Only eleven film strips were used in all subjects; two in English, four in history, and five in science.

Four phonograph records were used in foreign languages. Nine records were used in physical education, which is one-half the number recommended by the committee, but is above the average, six, for the county. Six records were used in general business as compared with an average of one for the county as a whole.

Only two models were used in science.

Thirty charts were used in science as compared with twenty-three in the county as a whole. Seventeen charts were used in home economics which is near the county average of eighteen. Four charts were used in general business.

Only a few flat pictures were displayed except in science where thirty were in use, and in home economics where twenty-six were utilized.

Twenty-five field trips and excursions were taken in all subjects, seven of which were taken in physical education.

Stokesdale High School used a total of twenty-nine maps and globes as compared with a county average of forty-five, and the committee's recommendation of forty.

#### Summerfield High School

Summerfield High School's audio-visual aid program is shown in Table XVI.

It is interesting to note that Summerfield High School used motion

TABLE XVI

A COMPARISON OF THE NUMBER OF AUDIO-VISUAL AIDS RECOMMENDED FOR USE IN TWELVE CURRICULUM FIELDS BY A COMMITTEE OF EXPERTS, WITH THEIR AVERAGE USE IN GUILFORD COUNTY HIGH SCHOOLS AND WITH THEIR USE IN SUMMERFIELD HIGH SCHOOL

Audio- Visual Aid	Number of aids		Curriculum field														
	Recommended by committee	Average use in county Use in this school	English	Mathematics	History	Sciences	Physical Education	Language	Foreign	Music	Art	Agriculture	Economics	Home Shop	Vocational Business	General	Salesmanship
Silent and sound films	Committee		20	7	14	30	19	7	9	15	18	7	14	7			
	County		6	1	11	15	6	0	2	20	9	2	1	0			
	School		5	0	8	20	5	2	x	10	5	x	1	x			
Film strips	Committee		21	12	17	33	20	9	14	18	27	5	20	7			
	County		6	1	6	8	4	0	1	17	2	0	0	0			
	School		8	10	15	10	5	3	x	2	2	x	0	x			
Glass slides	Committee		10	6	9	61	18	1	37	41	63	50	37	50			
	County		2	0	3	18	1	0	0	31	1	0	0	0			
	School		0	0	20	50	0	0	x	50	20	x	0	x			
Phono- graph records	Committee		36	1	10	3	18	14	112	0	2	0	26	2			
	County		6	0	1	0	6	1	8	0	0	0	1	0			
	School		0	0	0	0	20	10	x	0	0	x	0	x			
Models	Committee		1	13	2	14	33	0	1	4	5	6	1	0			
	County		0	1	1	6	0	0	9	4	1	0	0	0			
	School		0	0	0	4	0	0	x	2	0	x	0	x			
Charts	Committee		6	38	27	57	52	2	10	50	22	37	14	5			
	County		7	4	18	23	11	6	9	34	18	0	3	0			
	School		5	5	40	50	10	5	x	15	15	x	0	x			
Flat pictures	Committee		122	23	65	148	82	22	70	37	170	25	21	5			
	County		26	3	21	26	14	12	18	53	79	0	14	25			
	School		50	25	50	50	10	50	x	100	100	x	20	x			
Trips and ex- cursions	Committee		5	4	7	14	7	1	6	17	17	1	4	1			
	County		3	2	5	11	3	0	1	31	5	0	1	0			
	School		10	0	2	5	2	1	x	20	20	x	0	x			
Maps and globes	Committee					40											
	County					45											
	School					60											

X indicates that this subject is not taught in this high school.

picture films in every subject except mathematics. Twenty films were used in science, five in English, eight in history, and ten in agriculture.

Film strips were shown in all subjects except general business.

Fifteen were used in history, more than twice the county average of six. Ten were used in science and three in foreign language classes.

In the use of glass slides Summerfield surpassed both the average number used in the county and the number recommended by the committee. The history department showed twenty slides, more than twice the number indicated by the committee and over six times the average for the county. Both the science and agriculture departments used fifty slides, a much greater number than the averages for the county.

Twenty phonograph records were played in physical education and ten in foreign language classes. Science classes had the use of four models and agriculture classes, two.

Charts were displayed in every subject except general business. Science classes had the advantage of the use of forty. Many flat pictures were used in the Summerfield school, more than the county average being used in English, mathematics, history, agriculture, and home economics.

English classes at Summerfield made ten excursions. This is twice the number recommended by the committee, and more than three times the average for the county. Agriculture and home economics classes each took twenty field trips.

Summerfield High School used a total of sixty maps and globes in the field of history, which is well above the county average of forty-five.

#### Sumner High School

The audio-visual aid program in Sumner High School is shown in Table XVII.

This table shows that four motion picture films were shown in

TABLE XVII

A COMPARISON OF THE NUMBER OF AUDIO-VISUAL AIDS RECOMMENDED FOR USE IN TWELVE CURRICULUM FIELDS BY A COMMITTEE OF EXPERTS, WITH THEIR AVERAGE USE IN GUILFORD COUNTY HIGH SCHOOLS AND WITH THEIR USE IN SUMNER HIGH SCHOOL

Audio-Visual Aid	Number of aids Recommended by committee Average use in county Use in this school	Curriculum field												
		English	Mathematics	History	Sciences	Physical Education	Language	Foreign	Music	Art	Agriculture	Economics	Home Shop	Vocational Business
Silent and sound films	Committee	20	7	14	30	19	7	9	15	18	7	14	7	
	County	6	1	11	15	6	0	2	20	9	2	1	0	
	School	0	0	0	4	x	0	x	4	6	x	0	x	
Film strips	Committee	21	12	17	33	20	9	14	18	27	5	20	7	
	County	6	1	6	8	4	0	1	17	2	0	0	0	
	School	0	0	0	0	x	0	x	8	0	x	0	x	
Glass slides	Committee	10	6	9	61	18	1	37	41	63	50	37	50	
	County	2	0	3	18	1	0	0	31	1	0	0	0	
	School	0	0	0	0	x	0	x	120	0	x	0	x	
Phono- graph records	Committee	36	1	10	3	18	14	112	0	2	0	26	2	
	County	6	0	1	0	6	1	8	0	0	0	1	0	
	School	0	0	0	0	x	0	x	0	0	x	4	x	
Models	Committee	1	13	2	14	33	0	1	4	5	6	1	0	
	County	0	1	1	6	0	0	9	4	1	0	0	0	
	School	0	0	0	6	x	0	x	6	0	x	0	x	
Charts	Committee	6	38	27	57	52	2	10	50	22	37	14	5	
	County	7	4	18	23	11	6	9	34	18	0	3	0	
	School	1	0	2	1	x	0	x	75	75	x	2	x	
Flat pictures	Committee	122	23	65	148	82	22	70	37	170	25	21	5	
	County	26	3	21	26	14	12	18	53	79	0	14	25	
	School	6	0	0	0	x	0	x	20	700	x	0	x	
Trips and ex- cursions	Committee	5	4	7	14	7	1	6	17	17	1	4	1	
	County	3	2	5	11	3	0	1	31	5	0	1	0	
	School	0	0	0	12	x	0	x	75	4	x	0	x	
Maps and globes	Committee			40										
	County			45										
	School			27										

X indicates that this subject is not taught in this high school.

science, a number much below the county average of fifteen. Four films were shown in agriculture, and six in home economics.

The average number of film strips shown in the county in agriculture

was seventeen, which is over twice the number, eight, shown in this subject in the Sumner school. The use of glass slides was extensively employed with 120 being used in agriculture, which is nearly four times the county average of thirty-one.

The agriculture department in this school made extensive use of all other audio-visual aids. In the department six models were on display, seventy-five charts were exhibited, twenty flat pictures were used, and in addition, seventy-five field trips and excursions were taken.

Sumner High School used a total of twenty-seven maps and globes, a number much below the committee's recommendation and only about two-thirds the average for the county.

## CHAPTER IV

### SUMMARY, CONCLUSIONS, RECOMMENDATIONS

#### Summary

The purpose of this survey was to determine the use of the audio-visual aid resources of the Guilford County white high schools; to ascertain the number of each kind of aid used in each subject taught in each school during 1946-1947; and then to compare this number with the number representing the average use throughout the county, and also with the number of aids recommended for use by a committee of experts.

To ascertain what progressive teachers and administrators consider a satisfactory list of audio-visual aids for use in a high school, a questionnaire was sent to sixty individuals in Guilford and neighboring counties. These included college professors, college teachers, high school principals, high school teachers, and county superintendents. Fifty-two of the sixty questionnaires distributed were returned. From the consensus obtained by checking the replies Table I was prepared for use as a standard of comparison for each subject in each school.

Questionnaires also were sent to each of the fifteen high school principals in the county requesting each principal to indicate the number of audio-visual aids used in each subject field in his school. From their replies a county average was determined for each subject. This information was tabulated and is shown in Table II, Charter II.

A table was then prepared for each high school in the county showing the number of aids used in each subject taught in that school. This information is contained in Tables III through XVII, as shown in Chapter



III. To facilitate comparisons with the county average and with the committee's opinion, Tables I and II are included in each of the tables from III through XVII.

The writer's recommendations are based upon the findings resulting from the comparison of the use of the aids in each school with the average use in the county, and with the number of aids which the committee recommended for use in each high school subject.

The committee of experts recommended that audio-visual aids used during one year in a high school be substantially as follows:

**English:** twenty motion picture films, twenty-one film strips, ten glass slides, thirty-six records, one model, six charts, 122 flat pictures, five field trips and excursions.

**Mathematics:** seven motion picture films, twelve film strips, six glass slides, one record, thirteen models, thirty-eight charts, twenty-three flat pictures, four trips and excursions.

**History:** fourteen motion picture films, seventeen film strips, nine glass slides, ten records, two models, twenty-seven charts, sixty-five flat pictures, seven trips and excursions, forty maps and globes.

**Science:** thirty motion picture films, thirty-three film strips, sixty-one glass slides, three records, fourteen models, fifty-seven charts, 148 flat pictures, fourteen trips and excursions.

**Physical Education:** nineteen motion picture films, twenty film strips, eighteen glass slides, eighteen records, thirty-three models, fifty-two charts, eighty-two flat pictures, seven trips and excursions.

**Foreign Languages:** seven motion picture films, nine film strips, one glass slide, fourteen records, no models, two charts, twenty-two flat pictures, one trip or excursion.

Music and Art: nine motion picture films, fourteen film strips, thirty-seven glass slides, 112 records, one model, ten charts, seventy flat pictures, six trips and excursions.

Agriculture: fifteen motion picture films, eighteen film strips, forty-one glass slides, no records, four models, fifty charts, thirty-seven flat pictures, seventeen trips and excursions.

Home Economics: eighteen motion picture films, twenty-seven film strips, sixty-three glass slides, two phonograph records, five models, twenty-two charts, 170 flat pictures, seventeen trips and excursions.

Vocational Shop: seven motion picture films, five film strips, fifty glass slides, no records, six models, thirty-seven charts, twenty-five flat pictures, one trip or excursion.

General Business: fourteen motion picture films, twenty film strips, thirty-seven glass slides, twenty-six phonograph records, one model, fourteen charts, twenty-one flat pictures, four trips and excursions.

Salesmanship: seven motion picture films, seven film strips, fifty glass slides, two records, no models, five charts, five flat pictures, one trip or excursion.

The average use of audio-visual aids used in the white high schools of Guilford County during 1946-1947, listed by subject fields, is as follows:

English: six motion picture films, six film strips, two glass slides, six phonograph records, no models, seven charts, twenty-six flat pictures, three trips and excursions.

Mathematics: one motion picture film, one film strip, no glass slides, no records, one model, four charts, three flat pictures, two trips and excursions.

History: eleven motion picture films, six film strips, three glass slides, one record, one model, eighteen charts, twenty-one flat pictures, five trips and excursions, forty-five maps and globes.

Science: fifteen motion picture films, eight film strips, eighteen glass slides, no records, six models, twenty-three charts, twenty-six flat pictures, eleven trips and excursions.

Physical Education: six motion picture films, four film strips, one glass slide, six records, no models, eleven charts, fourteen flat pictures, three trips and excursions.

Foreign Languages: no motion picture films, no film strips, no glass slides, one record, no models, six charts, twelve flat pictures, no trips or excursions.

Art and Music: two motion picture films, one film strip, no glass slides, eight records, nine models, nine charts, eighteen flat pictures, one trip or excursion.

Agriculture: twenty motion picture films, seventeen film strips, thirty-one glass slides, no records, four models, thirty-four charts, fifty-three flat pictures, thirty-one trips and excursions.

Home Economics: nine motion picture films, two film strips, one glass slide, no records, one model, eighteen charts, seventy-nine flat pictures, five trips and excursions.

Vocational Shop: two motion picture films, no other aids.

General Business: one motion picture film, no film strips, no glass slides, one record, no models, three charts, fourteen flat pictures, one field trip or excursion.

Salesmanship: twenty-five flat pictures, no other aids of any kind.

### Conclusions

By comparing Table II with Table I, it is obvious that the average number of audio-visual aids used in most subjects in the Guilford County high schools is far below the number recommended by the committee. For example the average number of motion picture films used in English is six as compared with twenty recommended by the committee. The county average of six film strips in English compares unfavorably with the recommendation of the committee which is twenty-one. Only in charts did the county average of seven in English exceed the six recommended by the committee.

In the field of mathematics no audio-visual aid was used as frequently as recommended by the committee. The same was true for history with the exception of maps and globes where the average number in the county high schools was forty-five and the recommendation of the committee only forty.

In science more audio-visual aids were used than in most other subjects, yet even in this field of study the county average of every aid was below the number recommended by the committee. However, science teachers surpassed the teachers in most other subjects as is evident by noting the total number of audio-visual aids used by these teachers.

Few audio-visual aids were used in physical education, foreign languages, and art. Only in the number of charts used in foreign languages and in the number of models used in art did the county average exceed the recommendation of the committee.

The study revealed that agriculture teachers in Guilford County used a better balanced audio-visual aids program and more nearly approached the recommendations of the committee in the use of aids than any other group of teachers in the county. Five more motion picture films were used

on an average in the county schools than were recommended by the committee. The average number of flat pictures used was fifty-three as compared with thirty-seven, the recommendation of the committee.

Home economics is a fertile field for audio-visual aids, yet in Guilford County few of such aids were used in the schools. The nearest approach to the recommendation of the committee was in use of charts where an average of eighteen was used as compared with the twenty-two recommended.

Very few audio-visual aids were used in vocational shop, general business, and salesmanship. Only in salesmanship, where an average of twenty-five flat pictures were used in the schools, did the county average exceed the recommendation of the committee.

#### Recommendations

If the importance of audio-visual aids in the teaching program is accepted, and if attempts are made to get the maximum benefits from their use in Guilford County high schools, certain problems arising from their use must be recognized and a solution to these problems be found. Problems requiring consideration are: 1. adjusting the aids to the curriculum and the objectives set forth in the course of study; 2. correlating the aids with other teaching materials; 3. evaluating the aids with reference to their effectiveness in the teaching situation; and 4. properly training teachers in the correct use of audio-visual aids.

The audio-visual aid programs in the high schools of Guilford County varied greatly in the number of aids used. In all the schools some motion picture films were used. This was accounted for in part by the fact that a large number of films<sup>1</sup> were available from the County

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1. See Appendix F for a list of films included in the collection in the office of the County Superintendent.

Superintendent's office without cost to the schools. It is quite likely that additional films would have been used in the schools if this collection had included a large number of films more closely related to the subject matter taught, and if it had included films for all subjects. At the time of writing, no films were available from the county office for the use of teachers in many subject fields. Therefore when additional funds are available, it is recommended that a wider variety of films be purchased and placed in the county office so that teachers in all fields of high school study will have access to useful films that will help them utilize more fully this valuable aid to instruction.

No audio-visual aids other than films are kept in the Superintendent's office for use in the various schools of the county. All other aids must be provided on an individual school basis, necessitating much duplication. The writer wishes to suggest that the county purchase a supply of aids such as film strips, glass slides, models and charts, and make them available for use in the various schools of the county on the same basis as films are now used.

In general, the tables show that Guilford County high schools do not use the number of aids that should be used. In only a few instances did schools use a greater number of audio-visual aids than was recommended by the committee. The average county school was well supplied with maps and globes for use in history. However, eight schools had less than the number recommended by the committee. Because of the importance of this type of aid, these eight schools should at the earliest possible date make some provision to supply the number of necessary maps.

When an attempt is made to analyze the reason for the lack of use of many of the aids in the schools, one is immediately confronted with the

fact that most of the teachers lack a knowledge of the vast resources in this field and lack training in methods of utilizing these materials as well as in organizing a good audio-visual aid program. The teachers in Guilford County high schools should be required, either in college or in county workshops, to take courses emphasizing the value and importance of audio-visual aids to instruction, and explaining their use in the school program.

In addition to the preceding recommendations, the writer also wishes to make certain other recommendations for the improvement of the audio-visual aid program in Guilford County. These recommendations are:

1. A central depository such as the county office should be established for other audio-visual aids in addition to the motion picture films that are now distributed from this depository.
2. The aids should be distributed by some well organized and centralized system.
3. Suitable places for storage of aids, especially for maps and globes should be provided for in each school. Many teachers fail to use aids because of the difficulty in locating and transferring them from one room to another. It is too expensive for a school to equip each room with all the aids necessary for its use, but it is possible to have a central depository for storing all aids, and a good charging system for checking them to various rooms. This would greatly facilitate and increase the use of audio-visual aids in every school.
4. Because the use of certain aids such as moving pictures, film strips, and glass slides require a darkened room, a suitable room, properly equipped with projectors and blackout shades should be provided for each high school. The auditorium now used for this purpose in most

of the schools is usually too large and not often easily adapted to classroom work.

5. Many audio-visual aids are not used because the teachers are unable to operate the simple machines that are necessary to show the aids, and frequently no one else is available at the proper time to operate the machine. For this reason, it is recommended that each high school make the proper provision to train special groups of pupils to operate motion picture projectors, film strip projectors and opaque projectors.

6. Some means of transportation, such as a bus similar to a school bus, should be provided for each high school in Guilford County in order that many valuable field trips and excursions can be taken at the time when they will be most effective. Many trips are postponed and many are not taken because of the difficulty in securing transportation at the appropriate time. A bus for each school would remedy this situation.

Finally, to summarize the recommendations in this study, the evidence is clear that far too few aids were used in the Guilford County high schools during the year 1946-1947, and that many of the causes for the neglect of their use would be corrected by: 1. the proper selection of a wider variety of suitable motion picture films which would be made available through the county office; 2. the purchase by the county of audio-visual aids other than motion picture films to be deposited in the county office and loaned to each school; 3. the purchase of a sufficient number of maps and globes, by those schools that are deficient, in order to meet the minimum requirement suggested by the committee; 4. improved teacher training in the value, need, and use of audio-visual aids; 5. the distribution of the aids, deposited in the county office, through some central well-organized system; 6. the provision of suitable places for storage and



protection of such aids as maps, globes and films; 7. the provision of an audio-visual aid room in each school to facilitate the use of all aids; 8. the training in each school of a sufficient number of operators to make available a student operator every period in the day; 9. the provision of a bus for each school to take whole classes or groups of students on field trips and excursions.

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APPENDIXES

APPENDIX A

REPORT FORM

Courses Offered in the High Schools of Guilford County  
With the Number of Students Enrolled in Each Class

School \_\_\_\_\_ Enrollment \_\_\_\_\_

<u>Course</u>	<u>Textbook</u>	<u>Class Enrollment</u>
<b>ENGLISH</b>		
English I	English in Action; Good Companions	_____
English II	English in Action; Interesting Friends	_____
English III	English in Action; Voices of America	_____
English IV	English in Action; English Heritage	_____
Dramatics	The Stage and the School	_____
Speech	American Speech	_____
Journalism	Between Headlines	_____
Spelling		_____
<b>MATHEMATICS</b>		
General	Mathematics for Everyday Affairs	_____
Algebra I	Progressive First Algebra	_____
Algebra II	Progressive Second Algebra	_____
Plane Geometry	Plane Geometry	_____
Solid Geometry	New Solid Geometry	_____
Trigonometry	Plane Trigonometry	_____
<b>SOCIAL STUDIES</b>		
Citizenship	Cooperative Citizenship	_____
World History	Man's Advancing Civilization	_____
American History	History of the United States	_____
Economics	Everyday Economics	_____
Sociology	Civic Sociology	_____
Problems	Everyday Problems of American Democracy	_____
Geography	The Nations at Work	_____
Geography	High School Geography	_____
Geography	Economic Geography for Secondary Schools	_____
Ancient History	Man's Achievement, Vol. I	_____
Modern History	Modern History	_____
North Carolina History		_____
HEALTH	Health and Human Welfare	_____
PHYSICAL EDUCATION		_____

<u>Course</u>	<u>Textbook</u>	<u>Students</u>
SCIENCE		
General Science	General Science for Today	_____
Biology	Dynamic Biology	_____
Chemistry	High School Chemistry	_____
Physics	Modern Physics	_____
ART		
MUSIC		
AGRICULTURE		
Agriculture I		_____
Agriculture II		_____
Agriculture III & IV		_____
HOME ECONOMICS		
Home Economics I		_____
Home Economics II		_____
Home Economics III & IV		_____
INDUSTRIAL ARTS		
VOCATIONAL SHOP		
DIVERSIFIED OCCUPATIONS		
DISTRIBUTIVE EDUCATION		
BUSINESS EDUCATION		
General Business	General Business	_____
Typewriting I	Stuart Typing	_____
Typewriting II	Stuart Typing	_____
Business Arithmetic	Social Business Arithmetic	_____
Elementary Bookkeeping	20th Century Bookkeeping & Accounting	_____
Advanced Bookkeeping	20th Century Bookkeeping & Accounting	_____
Shorthand I	Gregg Shorthand, Functional Method	_____
Shorthand II	Gregg Speed Building and Applied Practices	_____
Business Correspondence	Effective Business Correspondence	_____
Salesmanship	Fundamentals of Selling	_____
Business Law	Essentials of Commercial Law	_____
FOREIGN LANGUAGES		
French I	Literature and Life, French Book	_____
French II	Literature and Life, French Book	_____
Latin I	New Elementary Latin	_____
Latin II	New Second Latin Book	_____
Spanish I	Literature and Life, Spanish Book	_____
Spanish II	Literature and Life, Spanish Book	_____
OTHER SUBJECTS		

APPENDIX B

QUESTIONNAIRE I

From the list given below, please check the field of instruction with which you are familiar and give the number of audio-visual aids that you think should be used in high school during one school year to supplement general instruction in that particular field.

Check

- English, Literature, Reading, Dramatics
- Mathematics, Arithmetic, Algebra, Geometry
- Civics, History, Geography, Economics, Sociology
- General Science, Biology, Physics, Chemistry
- Physical Education, Health, Safety
- Foreign Languages, French, Spanish, Latin
- Art, Music
- Agriculture
- Home Economics
- Industrial Art, Vocational Shop, Diversified Occupations
- General Business, Typing, Bookkeeping, Shorthand
- Salesmanship, Business Correspondence, Business Law

Number of aids needed during one year in field checked above

- Silent and Sound Films
- Film Strips
- Glass Slides
- Phonograph Records
- Models
- Charts
- Flat Pictures
- Field Trips and Excursions
- Maps and Globes for use in History

Your Name \_\_\_\_\_

Position \_\_\_\_\_

APPENDIX C

QUESTIONNAIRE II

High School \_\_\_\_\_ Address \_\_\_\_\_

Person Reporting \_\_\_\_\_ Title \_\_\_\_\_

Please give the actual number, or a close approximation of the number of audio-visual aids used in your high school during the past year (1946-1947) in each of the following areas.

Number

Silent and Sound Films

- ( ) English, Literature, Reading, Dramatics
- ( ) Mathematics, Arithmetic, Algebra, Geometry
- ( ) Civics, History, Geography, Economics, Sociology
- ( ) General Science, Biology, Physics, Chemistry
- ( ) Physical Education, Health, Safety
- ( ) Foreign Languages, French, Spanish, Latin
- ( ) Art, Music
- ( ) Agriculture
- ( ) Home Economics
- ( ) Industrial Art, Vocational Shop, Diversified Occupations
- ( ) General Business, Typing, Bookkeeping, Shorthand
- ( ) Salesmanship, Business Correspondence, Business Law

Film Strips

- ( ) English, Literature, Reading, Dramatics
- ( ) Mathematics, Arithmetic, Algebra, Geometry
- ( ) Civics, History, Geography, Economics, Sociology
- ( ) General Science, Biology, Physics, Chemistry
- ( ) Physical Education, Health, Safety
- ( ) Foreign Languages, French, Spanish, Latin
- ( ) Art, Music
- ( ) Agriculture
- ( ) Home Economics
- ( ) Industrial Art, Vocational Shop, Diversified Occupations
- ( ) General Business, Typing, Bookkeeping, Shorthand
- ( ) Salesmanship, Business Correspondence, Business Law

Glass Slides

- ( ) English, Literature, Reading, Dramatics
- ( ) Mathematics, Arithmetic, Algebra, Geometry
- ( ) Civics, History, Geography, Economics, Sociology
- ( ) General Science, Biology, Physics, Chemistry
- ( ) Physical Education, Health, Safety
- ( ) Foreign Languages, French, Spanish, Latin



## Glass Slides (continued)

- ( ) Art, Music
- ( ) Agriculture
- ( ) Home Economics
- ( ) Industrial Art, Vocational Shop, Diversified Occupations
- ( ) General Business, Typing, Bookkeeping, Shorthand
- ( ) Salesmanship, Business Correspondence, Business Law

## Phonograph Records

- ( ) English, Literature, Reading, Dramatics
- ( ) Mathematics, Arithmetic, Algebra, Geometry
- ( ) Civics, History, Geography, Economics, Sociology
- ( ) General Science, Biology, Physics, Chemistry
- ( ) Physical Education, Health, Safety
- ( ) Foreign Languages, French, Spanish, Latin
- ( ) Art, Music
- ( ) Agriculture
- ( ) Home Economics
- ( ) Industrial Art, Vocational Shop, Diversified Occupations
- ( ) General Business, Typing, Bookkeeping, Shorthand
- ( ) Salesmanship, Business Correspondence, Business Law

## Models

- ( ) English, Literature, Reading, Dramatics
- ( ) Mathematics, Arithmetic, Algebra, Geometry
- ( ) Civics, History, Geography, Economics, Sociology
- ( ) General Science, Biology, Physics, Chemistry
- ( ) Physical Education, Health, Safety
- ( ) Foreign Languages, French, Spanish, Latin
- ( ) Art, Music
- ( ) Agriculture
- ( ) Home Economics
- ( ) Industrial Art, Vocational Shop, Diversified Occupations
- ( ) General Business, Typing, Bookkeeping, Shorthand
- ( ) Salesmanship, Business Correspondence, Business Law

## Charts

- ( ) English, Literature, Reading, Dramatics
- ( ) Mathematics, Arithmetic, Algebra, Geometry
- ( ) Civics, History, Geography, Economics, Sociology
- ( ) General Science, Biology, Physics, Chemistry
- ( ) Physical Education, Health, Safety
- ( ) Foreign Languages, French, Spanish, Latin
- ( ) Art, Music
- ( ) Agriculture
- ( ) Home Economics
- ( ) Industrial Art, Vocational Shop, Diversified Occupations
- ( ) General Business, Typing, Bookkeeping, Shorthand
- ( ) Salesmanship, Business Correspondence, Business Law

## Flat Pictures

- ( ) English, Literature, Reading, Dramatics
- ( ) Mathematics, Arithmetic, Algebra, Geometry
- ( ) Civics, History, Geography, Economics, Sociology
- ( ) General Science, Biology, Physics, Chemistry
- ( ) Physical Education, Health, Safety
- ( ) Foreign Language, French, Spanish, Latin
- ( ) Art, Music
- ( ) Agriculture
- ( ) Home Economics
- ( ) Industrial Art, Vocational Shop, Diversified Occupations
- ( ) General Business, Typing, Bookkeeping, Shorthand
- ( ) Salesmanship, Business Correspondence, Business Law

## Trips and Excursions

- ( ) English, Literature, Reading, Dramatics
- ( ) Mathematics, Arithmetic, Algebra, Geometry
- ( ) Civics, History, Geography, Economics, Sociology
- ( ) General Science, Biology, Physics, Chemistry
- ( ) Physical Education, Health, Safety
- ( ) Foreign Language, French, Spanish, Latin
- ( ) Art, Music
- ( ) Agriculture
- ( ) Home Economics
- ( ) Industrial Art, Vocational Shop, Diversified Occupations
- ( ) General Business, Typing, Bookkeeping, Shorthand
- ( ) Salesmanship, Business Correspondence, Business Law

## Maps Used in History, Civics, Geography, Economics, Sociology

(You may have maps similar to the ones listed below and serving the same purpose. If so, check the one below that is comparable with the one you have.)

- ( ) United States, Physical-Political
- ( ) Europe, Physical-Political
- ( ) Asia, Physical-Political
- ( ) Africa, Physical-Political
- ( ) Australia, Physical-Political
- ( ) North America, Physical-Political
- ( ) South America, Physical-Political
- ( ) World, Physical-Political
- ( ) Western Hemisphere, Physical-Political
- ( ) North Carolina, Physical-Political
- ( ) Sixteen Inch Globe, Physical-Political
- ( ) United States, Political
- ( ) North Carolina, Political
- ( ) World, Political
- ( ) World, Commercial
- ( ) World, Polar Projection
- ( ) World, Mercator Projection
- ( ) World, Blackboard
- ( ) Hemispheres, Global Projection
- ( ) United States and Possessions

## Maps (continued)

- ( ) United States, Blackboard
- ( ) North Carolina, Blackboard
- ( ) World Explorations to 1600
- ( ) Territorial Claims in North America
- ( ) Early Grants and Origin of Thirteen Colonies
- ( ) The Thirteen Colonies
- ( ) Westward Movement
- ( ) Territorial Acquisition
- ( ) Secession
- ( ) The Civil War Period
- ( ) Resources and Conservation
- ( ) Greater United States
- ( ) Ancient Empires
- ( ) Greek Expansion and Conflicts
- ( ) Alexander's Empire 323 B.C.
- ( ) Development of the Roman Empire
- ( ) Christian Europe and the Crusades
- ( ) Economic Europe in the Middle Ages
- ( ) Europe after the Treaty of Utrecht, 1713 A.D.
- ( ) Europe after the Congress of Vienna
- ( ) The Great War, 1914-1918
- ( ) Rise and Decline of the Ottoman Empire, Balkan States
- ( ) The World after the World War
- ( ) Industrial Revolution in England
- ( ) Nile River Region
- ( ) Ancient Greece
- ( ) Ancient Rome
- ( ) Italy
- ( ) Spain
- ( ) Paris
- ( ) France
- ( ) England

Any other maps (Please list below)

- ( )
- ( )
- ( )
- ( )

## APPENDIX D

### PERSONNEL OF COMMITTEE OF EXPERTS

Dr. E. G. Purdom, Head of the Physics Department, Guilford College,  
Guilford College, North Carolina.

Dr. Charles N. Ott, Head of Chemistry Department, Guilford College,  
Guilford College, North Carolina.

Dr. E. H. F. Weis, Head of the Music Department, Guilford College,  
Guilford College, North Carolina.

Professor Vance T. Littlejohn, Head of the Department of Business  
Education, Woman's College, Greensboro, North Carolina.

Miss Jessie Peden, Supervisor, Curry Demonstration School, Woman's  
College, Greensboro, North Carolina.

Dr. Herbert Kimmel, Associate Professor of Education, Woman's College,  
Greensboro, North Carolina.

Miss Thelma Limehouse, Instructor of Mathematics, Greensboro City Schools,  
Greensboro, North Carolina.

Mrs. Edna L. Weis, Instructor of English, Guilford College, Guilford  
College, North Carolina.

Mrs. Frances R. Lael, Supervisor of Science and Mathematics, Curry  
Demonstration School, Woman's College, Greensboro, North Carolina.

Mr. J. E. Daniele, Instructor of Chemistry, Elon College, Elon College,  
North Carolina.

Mrs. Bessie Woodruff, Assistant Professor of Biology, Elon College, Elon  
College, North Carolina.

Mrs. A. W. McDonald, Instructor of Mathematics, Guilford College, Guilford  
College, North Carolina.

Mr. Ralph F. W. Brimley, Superintendent Forsyth County Schools, Winston-  
Salem, North Carolina.

Mr. E. D. Idol, Superintendent Guilford County Schools, Greensboro, North  
Carolina.

Mr. Tennor Bennison, Principal, Allen Jay High School, High Point, North  
Carolina.

- Mr. John McCrummen, Principal, Colfax High School, Colfax, North Carolina.
- Mr. G. A. Fulk, Principal, Mineral Springs School, Winston-Salem, North Carolina.
- Mr. Kenneth T. Miller, Principal, Jamestown High School, Jamestown, North Carolina.
- Mr. A. Doyle Early, Principal, Stokesdale High School, Stokesdale, North Carolina.
- Mr. R. W. Utley, Principal, Nathanael Greene High School, Liberty, North Carolina.
- Mr. O. W. Howell, Principal, McLeansville High School, McLeansville, North Carolina.
- Mr. T. H. Smith, Principal, Sumner High School, Sumner, North Carolina.
- Mr. S. L. Whiteley, Principal, Alamance High School, Alamance, North Carolina.
- Mr. T. Ray Gibbs, Principal, Clemmons High School, Clemmons, North Carolina.
- Mr. S. A. Winslow, Principal, Rural Hall High School, Rural Hall, North Carolina.
- Mr. D. J. Stillwell, Principal, South Fork School, Winston-Salem, North Carolina.
- Mr. R. M. Ainsley, Principal, Draper High School, Draper, North Carolina.
- Mr. Robert Ayers, Principal, Pleasant Garden High School, Pleasant Garden, North Carolina.
- Mr. Wendel H. Cude, Principal, Bessemer High School, Bessemer, North Carolina.
- Mr. E. N. Jenkins, Principal, Monticello High School, Monticello, North Carolina.
- Mr. H. S. Shepherd, Principal, Gibsonville High School, Gibsonville, North Carolina.
- Mr. S. G. Wallace, Principal, Old Richmond School, Tobaccoville, North Carolina.
- Mr. G. E. Love, Principal, Summerfield High School, Summerfield, North Carolina.

- Mr. W. E. Younts, former Principal, Bessemer High School, Bessemer, North Carolina.
- Miss Sarah Ruth Knox, Instructor of Home Economics, Guilford High School, Guilford, North Carolina.
- Mr. G. C. Bowden, Instructor of Agriculture, Summerfield High School, Summerfield, North Carolina.
- Mr. R. F. Brackin, Instructor of Agriculture, Guilford High School, Guilford, North Carolina.
- Miss Edith Hollowell, Instructor of Music, Guilford High School, Guilford, North Carolina.
- Mrs. Geneva W. Clark, Instructor of French, Guilford High School, Guilford, North Carolina.
- Mrs. Estelle S. Winchester, Instructor of Mathematics and French, Summerfield High School, Summerfield, North Carolina.
- Mr. F. L. Larson, Instructor of Health and Physical Education, Greensboro City Schools, Greensboro, North Carolina.
- Mr. J. L. Dawson, Instructor of Science, Pleasant Garden High School, Pleasant Garden, North Carolina.
- Mr. Charles R. Bird, Instructor of Science, Greensboro City Schools, Greensboro, North Carolina.
- Mr. W. A. Poovey, Instructor of Science, Draper High School, Draper, North Carolina.
- Mr. Glade C. Lovingood, Instructor of History and Science, Sumner High School, Sumner, North Carolina.
- Mr. Jack Smith, Instructor, South Fork High School, Winston-Salem, North Carolina.
- Mrs. Mary P. Gamble, Instructor of History, Summerfield High School, Summerfield, North Carolina.
- Mr. Donald Farthing, Instructor of Mathematics, Ruffin High School, Ruffin, North Carolina.
- Mr. David L. Meredith, Instructor of Mathematics, Guilford High School, Guilford, North Carolina.
- Mrs. Sara H. Summers, Instructor of English, Summerfield High School, Summerfield, North Carolina.
- Mrs. Cornelia Harman, Instructor of English, Guilford High School, Guilford, North Carolina.

## APPENDIX E

### THE FIFTEEN PRINCIPALS WHO CHECKED AND RETURNED QUESTIONNAIRE II

1. Mr. S. L. Whiteley, Alamance High School, Alamance, North Carolina.
2. Mr. Tennor Bennison, Allen Jay High School, High Point, North Carolina.
3. Mr. W. E. Younts, Bessemer High School, Bessemer, North Carolina.
4. Mr. John McCrummen, Colfax High School, Colfax, North Carolina.
5. Mr. H. S. Shepherd, Gibsonville High School, Gibsonville, North Carolina.
6. Mr. J. R. Robbins, Guilford High School, Guilford, North Carolina.
7. Mr. Kenneth T. Miller, Jamestown High School, Jamestown, North Carolina.
8. Mr. O. W. Howell, McLeansville High School, McLeansville, North Carolina.
9. Mr. E. N. Jenkins, Monticello High School, Monticello, North Carolina.
10. Mr. R. W. Utley, Nathanael Greene High School, Liberty, North Carolina.
11. Mr. Robert Ayers, Pleasant Garden High School, Pleasant Garden, North Carolina.
12. Mr. H. G. Waters, Rankin High School, Greensboro, North Carolina.
13. Mr. A. D. Early, Stokesdale High School, Stokesdale, North Carolina.
14. Mr. G. E. Love, Summerfield High School, Summerfield, North Carolina.
15. Mr. T. H. Smith, Sumner High School, Sumner, North Carolina.

APPENDIX F

FILMS IN THE OFFICE OF THE SUPERINTENDENT  
OF GUILFORD COUNTY SCHOOLS

Using the Classroom Film	Despotism
Adventures of Bunny Rabbit	The Industrial Revolution
Robin Redbreast	Property Taxation
Three Little Kittens	New England Fisherman
Basketball - Ball Handling	The Work of the Atmosphere
Basketball - Defensive Footwork	The Atmosphere and its Circulation
Basketball - Shooting	The Velocity of Chemical Reaction
The Development of Transportation	Chemistry and a Changing World
The Miracle of Motorized America	Elements of Electrical Circuits
Distributing America's Goods	Electrochemistry
The Airplane Changes our World Map	Our Earth
The Passenger Train	The Earth in Motion
Boats	The Work of Running Water
Principles of Baking	The Work of Rivers
Principles of Cooking	The Wearing Away of the Land
Principles of Home Canning	Ground Water
Fundamentals of Diet	The Earth's Rocky Crust
Digestion of Food	Water Power
Safety in the Home	Molecular Theory of Matter
The Policeman	Oxidation and Reduction
The Bus Driver	Series and Parallel Circuits
Simple Machines	Meteorology and Navigation
Furniture Craftsmen	Light Waves and Their Uses
The Cattleman	Heredity
Research Engineering	The Primary Cell
Plant Growth	Nervous System
Roots of Plants	Heart and Circulation
Leaves	Energy and its Transportation
Animal Life	Teeth
Common Animals of the Woods	Care of the Feet
The Frog	The Eyes and Their Care
The Sunfish	Reproduction Among Mammals
The Housefly	Coast to Coast Geography from the Air
Spiders	Global Concept and the Age of Flight
Colonial Expansion	The Northeastern States
Pioneers of the Plains	The Southeastern States
Kentucky Pioneers	The Far Western States
The Westward Movement	The Northwestern States
Early Settlers of New England	Colonial Children
Discovery and Exploration	Navajo Children
A Planter of Colonial Virginia	Children of Switzerland
Flatboatmen of the Frontier	Children of Holland
Democracy	Children of China



Eskimo Children  
French-Canadian Children  
Children of Japan  
Mexican Children  
People of Mexico  
Arts and Crafts of Mexico  
Alaska - Reservoir of Resources  
Argentina  
Chile  
Peru  
Brazil  
People of the Congo  
The Middle States  
Growth of Cities  
Life in Old Louisiana